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# City of Tampa Management Analysis and Report System (MARS). Volume 2 Operations Manual

Tampa Water Dept., FL

Prepared for

Municipal Environmental Research Lab.
Cincinnati, OH

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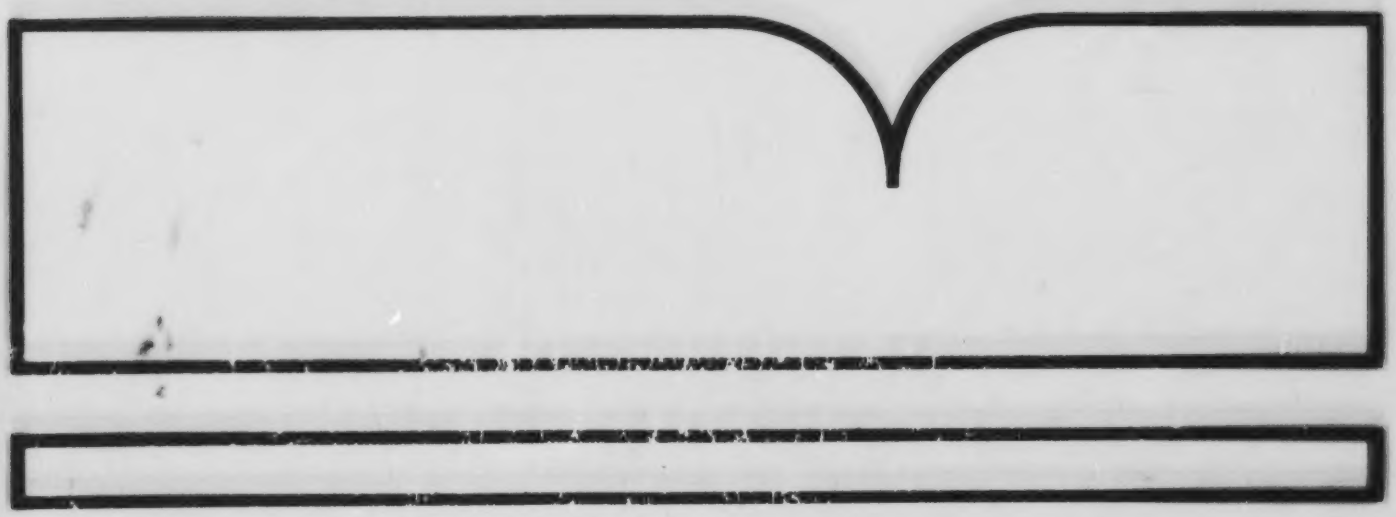

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# CITY OF TAMPA
# MANAGEMENT ANALYSIS AND REPORT SYSTEM
# (MARS)

## VOLUME II
## (OPERATIONS MANUAL)

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16. ABSTRACT

This three-volume report describes the development and implementation of a management analysis and report system (MARS) in the Tampa, Florida, Water and Sanitary Sewer Departments. Original system development was based on research conducted in a smaller water utility in Kenton County, Kentucky. MARS will help both the Water and Sanitary Sewer Departments control costs and manage expanding service requirements more effectively and efficiently.

MARS was able to meet project objectives and satisfy the reporting requirements of the Tampa Water and Sanitary Sewer Departments with information furnished monthly. The system is considered proven because it has produced reports as required in a stand-alone environment.

Volume I documents the results of 2 years of activities in adopting the MARS to a large water utility and to a wastewater utility; Volume II contains operating instructions for the MARS programs; and Volume III, primarily a system analyst's/programmer's guide, contains the source code for all computer programs in Tampa's MARS.

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## FOREWORD

This document contains the information essential to operating the Management Analysis and Report System (MARS) at the City of Tampa. This system provides a series of financial reports to the management of the City Water Department and Sanitary Sewer Department. The reports are intended to provide the means to monitor and upgrade department performance on a continuing basis. MARS is an adaptive system which readily accepts management decisions to change departmental activities, administrative allocations, cost centers, and other department functions. Therefore, this document was written not only for computer operators, but includes information essential to all levels of the management, operator, and user team.

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# A. MARS OVERVIEW

## 1. MANAGEMENT REPORTS

Management Analysis and Report System (MARS) provides four levels of financial management reports on a monthly basis, and management access to specific data on a when-desired basis. Numerous supplemental reports and lists are also available to the users. A brief description of the principal reports follows. Specific details and sample reports are provided later in Appendices A and B of this document.

a. WATER-RPT1/SEWER-RPT1 (Level I - Summary of System Information Report): The Level I report, specifically designed for top utility management, contains operating and maintenance cost data summarized into major operational categories along with additional information useful in the evaluation of the operations of the entire utility.

   The first five rows contain cost data expressed on a productivity basis with dollar cost per million gallons of flow ($/MG) for the: 1) current month, current year; 2) previous month, current year; 3) current month, previous year; 4) year-to-date, current year; and 5) year-to-date, previous year. These unit costs may be compared in this manner to facilitate a trend analysis.

   The next two rows contain the total costs for the current month and year-to-date, and the last two rows provide a percentage of total cost to each function for the current year-to-date and the previous year-to-date. This provides an indication of shifts in cost and trends in areas where expenses are increasing.

   Production unit information is presented at the bottom of the page, along with percent of budget funds remaining. The production unit for the Water Department is classified as "Revenue Producing Water (RPW)", the amount of water from which revenue is derived; while the Sanitary Sewer Department uses "Billable Q", billed sewer line flow.

b. WATER-RPT2/SEWER-RPT2 (Level II - Cost Comparison): This report compares the actual costs incurred with the budgeted costs. Six columns of numbers are printed. The first two columns show actual costs for the current period and year-to-date. The second two columns reflect the budget by year-to-date and annual amount.

The budgeted year-to-date amount represents the annual budget prorated for the number of months expired. The fifth and sixth columns show the variance of actual cost to budgeted cost as a balance and as a percent. In the comparison of actual costs to budget, the rows of costs coincide with the general ledger chart of accounts (object codes).

c. WATER-RPT3/SEWER-RPT3 (Level III - Cost Comparison Report): The Level III report provides a comparison of current period year-to-date cost with the previous year year-to-date costs for each of the report's cost categories and prints this comparison as a variance in dollars and as a percent.

   The rows representing the cost categories are grouped together by the four major utility functions. Under each function, the object codes of the FIN system are consolidated by sub-categories of operating cost and maintenance cost, but printed with corresponding object code descriptions. The major standard cost categories are: (1) payroll cost which includes executive salaries, regular salaries, CETA, other labor, benefits - executive & regular, and benefits-CETA: (2) other direct cost, which include general cost, repair & maintenance, chemical and power; (3) interest and debt service; and (4) depreciation.

d. WATER-RPT4/SEWER-RPT4 (Level IV - Detail of Cost by Cost Center Report): The Level IV report provides the detailed cost activity by unique utility cost centers, thereby identifying specific cost for various components of the utility system, (i.e. for water: acquisition, purification, delivery, support services; and for sewer: collection, treatment, disposal and support services).

   It is presented in matrix form, with the horizontal axis representing the activity associated with object code numbers and the vertical axis representing the specific cost center within the utility operation. The dollar amount of operating and maintenance cost by object code number for each cost center for the current period is displayed at the appropriate intersection of a row and a column.

   Separate reports are printed for each major utility function, with the data for each corresponding to its functional title. As an example, all Sanitary Sewer collection cost centers and related object codes will always print a Level IV report titled "COLLECTION".

   The cost categories description relates to the FIN object coding system. Each object code represents a type of operating or maintenance expenditure for a particular cost center. The total of any row will give the total dollars expended for a particular object code within a particular utility function and the totals of

the columns represent the total dollars charged to each cost center with the same utility function. In order to eliminate blank spaces or pages on the report, the program will print an account number (object code) only if it has an expense listed under the cost center.

Since costs are accumulated on this report by identifiable cost centers within the utility system, all cumulative costs for a particular cost center (physical point in most cases) can be related to the utility's service area map or schematic.

e. SEWER-RPT5 (Level V - Summary of Cost Centers): The Level V is developed for the Sanitary Sewer Department to print a Level IV type report but to accumulate cost by major cost center groups. Essentially, the Level V and Level IV appear alike, except the cost centers on Level IV are presented in detail.

f. WATER-RPT6/SEWER-RPT6 (Level VI - Video and Print Display of Specific Cost Center): Since the Level IV was so voluminous, a program was developed to allow for the analysis of a single cost center thus eliminating the excessive amount of printing. The Level VI allows the user to request, either by video display or a printout, of a specific cost center by one or all of the object codes (accounts) that had charges to that cost center.

## 2. OPERATIONAL CONCEPTS

MARS was designed to accept virtually all of its input data requirements, approximately 20,000 financial transactions per month, via magnetic tape transfer from the City of Tampa's primary computer system. Thus, data entry is limited to entering the month number and two production flow numbers for each department. All other data entry requirements are related to correcting errors.

Originally, it was envisioned that computer to computer data transfer would be almost error free and that one Prime computer system operator could run the system for both departments almost without interference with his normal duties. After data entry, all data processing can be run in background mode by using two commands: 1) RUN_FIRSTEDIT, and 2) RUN_REPORTS.

Ideally, in an error free environment, the operator would type the first command, an hour later type the second, and return several hours later to pick up and distribute the monthly reports. In actual practice, it was found that 0.5 percent of the records were in error; some due to incomplete editing at data entry level, but most due to management decisions which had not completely filtered down to all levels.

Error free environment is still the goal. However, for the interim period, it is recommended that each department provide its own operator so

that authority, control, responsiveness, and performance of each is independent of the other. Recommended procedures for achieving this goal are detailed throughout this manual. Although some sections of this document apply specifically to the operator and some specifically to management/users, they are recommended reading for all.

## B. MARS OPERATIONAL PROCEDURES

### 1. GENERAL INTRODUCTION

MARS performs a very complex processing task with minimal operator skill and time requirements. The overall task is divided into three functions:

(1) Expense and budget data entry.
(2) Editing and correcting data.
(3) Calculating and printing reports.

The first function is performed by a Prime system operator which takes magnetic tape data provided by the primary City computer and transfers it to independent disk files for the Water Department and Sanitary Sewer Department. The remaining functions are accomplished by an operator from each department working independently to produce reports for their department.

### 2. PERSONNEL REQUIREMENTS

a. Prime Computer Operator - (1) A qualified Prime system operator capable of loading tapes and executing command files. (2) Task requires approximately 15 minutes of time per month.

b. Department Operators - (1) Required operator skills are minimal typing ability and a thorough knowledge of the procedures described in this document. (2) Time required will be 1 to 2 man-days dispensed in small increments throughout the month. Time requirements depend primarily on the number of man-induced errors and the effort required to find and eliminate the errors. NOTE: The System was designed with identical command file name for each department in order to simplify training and system operation.

### 3. NORMAL MONTHLY OPERATIONS

a. General Instructions - the following instructions will be useful to operators not familiar with the Prime computer system. (NOTE: Underlining in this volume of the MARS documentation indicates the operator's response - what is keyed into the computer.)

(1) First, log into MARS by typing: LOGIN MARS, then depress the RETURN key.

(2) Then, to access (attach) the Water Department or Sanitary Sewer Department type:
A >*WATERDEPT
(or) A >*SEWERDEPT (NOTE: depress RETURN key after all typed entries)

(3) List department programs and files by typing: L

(4) Executing command files is accomplished in one of two modes: COMMAND (CO) or PHANTOM (PH). Type only the first two letters (as a prefix) and the command file name, (eg. "PH RUN_FIRSTEDIT"). The primary difference between the two is that in the COMMAND mode the terminal is actively printing execution information as it occurs, while in the PHANTOM mode information is written on a file, thus freeing the terminal for other operations. (The modes to be used in MARS are indicated in Section C, paragraph 2.)

(5) To execute programs -

| | | |
|---|---|---|
| Systems prompts: | | OK |
| Type | : | SEG ("run program name") |
| Systems prompts: | | ENTER FILE ASIGNMENTS |
| | | > |
| Type | : | / |
| System prompts | : | FILE ASSIGNMENTS COMPLETE (followed by prompts related to the specific program) |

(eg. SEG #WRPT6 (Note - all run program names start with #).)

(6) In the event of problems while executing a program, depress the CONTROL key simultaneously with depressing the letter P key. When the system prompts "OK"; type C ALL to close all files left open by the premature termination of the program.

(7) To end a session type: LO and the system will respond by logging your department out. (Note that operating times are recorded by the system for all users.)

The simplest method of executing programs is the MENU method. All programs are assigned numbers, thus the operator merely types the task number instead of SEG #---- and slash (/). Both methods are simple to use, although the MENU method is a few seconds faster and probably results in fewer misentries.

During the fall of 1981, it was agreed between City and Act Systems' personnel that a City programmer would write a small utility program to display MARS on a screen MENU. The primary goal being to make the MARS MENU look like all other City MENUs. After a change of the City's Prime system manager, the

MENU programming task was stopped just short of completion. Therefore, this manual was written as if the MENU system does not exist. It is recommended that the MENU program be completed and/or released for use.

b. Data Input Procedures -

(1) Management Responsibilities: The process of getting accurate and timely input data for MARS involves several departments within the City. The following paragraphs outline the proposed procedure for getting two magnetic tapes, one containing expense data, and the other containing budget data to the designated Prime system operator, at the end of each month.

(2) Request For FIN System Input Data Tapes: Both the Water Department and the Sanitary Sewer Department MARS user is responsible for requesting that the City MIS Department create his respective monthly budget and expense tapes used as input data in MARS.

The budget tapes are created by extracting the current budget information from the City's FIN General Ledger files. The expense tapes are created from the FIN system CIP files and consist of data based on the transaction date which coincides with the MARS report date. In addition, other data recorded during the current reporting period, but whose transaction dates are prior to the reporting period, will also be included. This is accomplished by the user recording a beginning and ending range for the program to select the data with prior transaction dates.

The normal schedule for requesting the monthly budget and expense tapes would be the second Tuesday following the close of the monthly accounting period. However, prior to initiating the tape request, the user must verify with the City General Accounting Department and the City MIS Department that all required accounting system and related subsystem (i.e. work order system) have been processed. If the work order subsystem has not been processed, the MARS user should contact the Chief Accountant - Revenue and Finance Department, to determine when the processing will be completed. Once all FIN systems including those that affect the CIP files, have been processed successfully, the request can be submitted.

In order to create the budget and expense tapes the user should submit two Data Center Work Request forms #FIN 379. The budget tape job name is ACT 002 and the expense tape is ACT 001. Figures 1 and 2 are examples of completed Data Center Work Request form for the expense and budget tapes respectively.

CITY OF TAMPA
CITY HALL
Tampa, Fl 33602

**DATA CENTER WORK REQUEST**

Data Control Number / Job Number: /

1. Non-Daily Request should be submitted 24 hours before needed unless otherwise specified. 2. Press hard. You are making 4 copies.

REQUESTOR COMPLETES THIS SECTION

Name of Job: ACT 001

Requesting Department: WATER/SEWER

Date Requested: XX/XX/XX

Last Date to Include: (SEE SPECIAL INSTRUCTIONS)

REPORT NEEDED BY ▶ Date: XX/XX/XX Time: XX:XX

Requester's Name: (CITY EMPLOYEE'S NAME) Telephone Number: XXXX

Number of Inputs: _____ Transactions _____ Documents Other: _____

☒ 1 copy needed ☐ More than 1 copy needed, quantity: _____

Type of Forms to be Used:

Special Instructions:

DATA FORMAT: XX/XX (YEAR/MONTH)

START DATE: XX/XX/XX (MONTH/DAY/YEAR)

END DATE: XX/XX/XX (MONTH/DAY/YEAR)

IF JOB ABORT 7C-DUMPL

Authorized By (Name): (CITY EMPLOYEE'S NAME) Title: (TITLE)

User Informed Report is Ready

FINISHED REPORT RECEIVED BY ▶ Name: Date: Time: AM PM

Special Remarks:

Originated in Data Control By:

Received in Data Control By:

Date Time

Batch Numbers:

KEY PUNCH – IN
Date Time

KEY PUNCH – OUT
Date Time

Number of Records:

Key Tape Numbers:

SCHEDULING – IN
Date Time

SCHEDULING – OUT
Date Time

COMPUTER OPERATIONS – IN
Date Time

COMPUTER OPERATIONS – OUT
Date Time

Supervisor's Initials:

RELEASED FROM DATA CONTROL
Date Time

I/O Clerk's Initials:

PIN 378 (1/81) White - Travel Copy; Yellow - I/O Control File Copy; Pink - Originating Department Original; 2802002903

Figure 1.

CITY OF TAMPA
CITY HALL
Tampa, Fl 33602

**DATA CENTER WORK REQUEST**

Data Control Number / Job Number: /

1. Non-Daily Request should be submitted 24 hours before needed unless otherwise specified. 2. Press hard. You are making 4 copies.

REQUESTOR COMPLETES THIS SECTION

Name of Job: ACT 002

Requesting Department: WATER/SEWER

Date Requested: XX/XX/XX

Last Date to Include:

REPORT NEEDED BY ▶ Date: XX/XX/XX Time: XX:XX

Requestor's Name: (CITY EMPLOYEE'S NAME) Telephone Number: XXXX

Number of Inputs: _____ Transactions _____ Documents Other: _____

☒ 1 copy needed ☐ More than 1 copy needed, quantity: _____

Type of Forms to be Used:

Special Instructions:

DATA FORMAT: XX/XX (YEAR/MONTH)

IF JOB ABORT 7C-DUMPL

Authorized By (Name): (CITY EMPLOYEE'S NAME) Title: (TITLE)

User Informed Report is Ready:

FINISHED REPORT RECEIVED BY ▶ Name: Date: Time: AM PM

Special Remarks:

Originated in Data Control By:

Received in Data Control By:

Date Time

Batch Numbers:

KEY PUNCH – IN
Date Time

KEY PUNCH – OUT
Date Time

Number of Records:

Key Tape Numbers:

SCHEDULING – IN
Date Time

SCHEDULING – OUT
Date Time

COMPUTER OPERATIONS – IN
Date Time

COMPUTER OPERATIONS – OUT
Date Time

Supervisor's Initials:

RELEASED FROM DATA CONTROL
Date Time

I/O Clerk's Initials:

FIN 379 (1/81) White - Travel Copy; Yellow - I/O Control File Copy; Pink - Originating Department Original; 2802002803

Figure 2.

It is recommended that in the future both the expense tape and the budget tape be created automatically by the City's MIS Department, according to the previously mentioned schedule. The Department users should still verify that all systems have been processed prior to the date the tapes are to be produced. If the Department user detects a data problem, it is his responsibility to contact the MIS Department and request a delay in the tape creation until the problems have been resolved.

(3) Prime System Operator Responsibilities: The primary task is to transfer tape data to disk files and notify the Water and Sewer Departments when the task is accomplished.

Step one is to execute the RUN_MAGNET command file by typing: CO RUN_MAGNET. The program will prompt "PLEASE MOUNT THE EXPENSE TAPE". After the tape is ready, the task will take approximately 9 minutes to complete.

Step two is to type: CO_RUN MAGNET2. The system prompts "PLEASE MOUNT THE BUDGET TAPE". This task takes abount 5 minutes.

The last step is to check the video display for error messages. If none, notify the departments that the current month's data is ready. If error messages do exist, return the tapes to the MIS Department with appropriate instruction concerning the errors. Figures 3 and 4 are samples of the RUN_MAGNET and RUN_MAGNET2 respectively.

c. Editing and Correcting Data

(1) Preliminary Task - The departmental operators start the monthly processs by obtaining the production flow data. For the Water Department the amount of treated water and RPW (in thousands of gallons) for the month is required. For the Sewer Department plant flow and billable flow (Q) (in thousands of gallons) is required.

The next procedure is to verify with management if any activities, object codes, or cost centers have been added, deleted or names changed during the month. The Water Department representative must also review the allocation procedures for possible changes. If changes occurred, the procedures for changing TABLE FILES must be used. (Refer to Section B, subsection c., para (5) of this report.)

When ready, the operator should LOG-IN on the terminal and attach to the appropriate department. After successfully logging-in, the first step is to enter the flow data by typing SEG #DATAINPUT.

```
DATE
Monday, June 14, 1982 4:33 PM
OK, ED RUN_MAGNET
EDIT
P200
.NULL.
COMO PRINT_MAGNET
A ACTS
DATE
FUTIL
CLEAN EXPMO
CLEAN BGTMO
Q
M
^207^207^207PLEASE MOUNT THE EXPENSE TAPE ^207^207^207
ASS MTO -WAIT
MAGNET
RE
O
1
32
1
EBC
F
EXPMO
UNASSIGN MTO
COMO -E
BOTTOM
FILE
RUN_MAGNET
OK, DATE
Monday, June 14, 1982 4:33 PM
OK,
```

Figure 3.

```
DATE
Monday, June 14, 1982 4:41 PM
OK, ED PRINT_MAGNET
EDIT
P500
.NULL.
OK, A ACTS
OK, DATE
Monday, June 14, 1982 3:31 PM
OK, FUTIL
[FUTIL rev 18.3]
> CLEAN EXPMO

> CLEAN BGTMO

> Q
OK, M
^207^207^207PLEASE MOUNT THE EXPENSE TAPE ^207^207^207
OK, ASS MTO -WAIT
Device MTO assigned.
OK, MAGNET

[MAGNET rev. 18.1]

OPTION: RE
MTU # = 0
MT FILE # = 1
LOGICAL RECORD SIZE = 32
BLOCKING FACTOR = 1
ASCII, BCD, BINARY, OR EBCDIC? EBC
FULL OR PARTIAL RECORD TRANSLATION? F
OUTPUT FILE: EXPMO

DONE...       30762 PHYSICAL RECORDS READ,       30762 LINES OUTPUT
OK, UNASSIGN MTO
Device released.
OK, COMO -E
BOTTOM
FILE
PRINT_MAGNET
OK,
```

Figure 3. (continued)

```
DATE
Monday, June 14, 1982 4:35 PM
OK, ED RUN_MAGNET2
EDIT
P200
.NULL.
COMO PRINT_MAGNET2
DATE
FUTIL
CLEAN BGTMO
Q
DATE
M
^207^207^207 PLEASE MOUNT THE BUDGET TAPE ^207^207^207
ASS MTO -WAIT
MAGNET
RE
0
1
27
1
EBC
F
BGTMO
UNASSIGN MTO
/* THIS PROGRAM MOVES NEW MONTHLY INPUT DATA
/* TO THE WATER AND SEWER DEPARTMENTS.
DATE
co -pause
A *>WATERDEPT
FUTIL
CLEAN EXPNW
CLEAN BUDGW
Q
A ACTS
A *>SEWERDEPT
FUTIL
CLEAN EXPNS
CLEAN BUDGS
Q
```

Figure 4.

```
DATE
A ACTS
SEG #CHECKDATA
/
DATE
FUTIL
FROM ACTS
TO *>WATERDEPT
COPY EXPMO EXPNW
COPY BGTMO BUDGW
TO *>SEWERDEPT
COPY EXPMO EXPNS
COPY BGTMO BUDGS
Q
A ACTS
DATE
COMO -E
LOGOUT
BOTTOM
FILE
RUN_MAGNET2
OK,


DATE
Monday, June 14, 1982 4:42 PM
OK, ED PRINT_MAGNET2
EDIT
P500
.NULL.
OK, DATE
Wednesday, June 9, 1982 11:47 AM
OK, FUTIL
[FUTIL rev 18.3]
> CLEAN BGTMO

> Q
OK, DATE
Wednesday, June 9, 1982 11:47 AM
OK, M
^207^207^207 PLEASE MOUNT THE BUDGET TAPE ^207^207^207
OK, ASS MT0 -WAIT
Device MT0 assigned.
OK, MAGNET

[MAGNET rev. 18.1]
```

Figure 4. (continued)

```
OPTION: RE
MTU # = 0
MT FILE # = 1
LOGICAL RECORD SIZE = 27
BLOCKING FACTOR = 1
ASCII, BCD, BINARY, OR EBCDIC? EBC
FULL OR PARTIAL RECORD TRANSLATION? F
OUTPUT FILE: BGTMO

DONE...        1322 PHYSICAL RECORDS READ,        1322 LINES OUTPUT
OK, UNASSIGN MTO
Device released.
OK, /* THIS PROGRAM MOVES NEW MONTHLY INPUT DATA
OK, /* TO THE WATER AND SEWER DEPARTMENTS.
OK, DATE
Wednesday, June 9, 1982 11:48 AM
OK, A *>WATERDEPT
OK, FUTIL
[FUTIL rev 18.3]
> CLEAN EXPNW

> CLEAN BUDGW

> Q
OK, A ACTS
OK, A *>SEWERDEPT
OK, FUTIL
[FUTIL rev 18.3]
> CLEAN EXPNS

> CLEAN BUDGS

> Q
OK, DATE
Wednesday, June 9, 1982 11:49 AM
OK, A ACTS
OK, SEG #CHECKDATA
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
```

Figure 4. (continued)

```
READING EXPENSE FILE
02500+ RECORDS COMPLETED
05000+ RECORDS COMPLETED
07500+ RECORDS COMPLETED
10000+ RECORDS COMPLETED
12500+ RECORDS COMPLETED
15000+ RECORDS COMPLETED
17500+ RECORDS COMPLETED
20000+ RECORDS COMPLETED
22500+ RECORDS COMPLETED
25000+ RECORDS COMPLETED
27500+ RECORDS COMPLETED
30000+ RECORDS COMPLETED
32500+ RECORDS COMPLETED
EXPENSE FILE AT END
READING BUDGET FILE
BUDGET FILE AT END

INPUT DATA CHECK

  *** NO COUNT OR DOLLAR ERRORS

NO DATE ERROR   0000000013182+

OK, DATE
Wednesday, June 9, 1982 11:52 AM
OK, FUTIL
[FUTIL rev 18.3]
> FROM ACTS
> TO *>WATERDEPT
> COPY EXPMO EXPNW
> COPY BGTMO BUDGW
> TO *>SEWERDEPT
> COPY EXPMO EXPNS
> COPY BGTMO BUDGS
> CLEAN EXPMO

> CLEAN BGTMO

> Q
OK, A ACTS
OK, DATE
Wednesday, June 9, 1982 11:53 AM
OK, COMO -E
BOTTOM
FILE
PRINT_MAGNET2
OK,
```

Figure 4. (continued)

The prompts and answers are as follows:

```
Prompt:  ENTER FILE ASSIGNMENTS:
         >
Answer:  /
Prompt:  FILE ASSIGNMENT COMPLETE
         DO YOU WANT TO ZERO FILES.  Y or N
Answer:  N
Prompt:  LAST ENTRY MONTH WAS  02
         TREATED WATER = 00001581288
         RAW WATER     = 00001579286
```

Figure 5 is a sample of the #DATAINPUT program's operation.

Data entry Note: (a) month MUST be entered with 2 digits. Use "0" and month number for single digit months. (b) Do NOT use decimal points with numeric entries.

(2) Edit Procedure - The departmental operator starts the monthly MARS process by typing PH RUN FIRSTEDIT and depressing the RETURN key. This command executes the functional tasks of rejecting unwanted input data, merging the accepted expense and budget data, and then editing that data for errors. Figure 6 is an examples of the system printout of running the first edit.

It takes only a moment to type this command, then the operator is free for other duties for approximately 30 minutes. (See Section C para 5. OPERATING TIMES, for more specific details.) When the operator returns, three reports will be available for review.*

WATE01 - Water Department reject report
WATE02 - Water Department merge report
WATE03 - Water Department edit report

NOTE: * For the Sanitary Sewer Department the reports are called SEWE01 - 03. Also note operation of the two departments is totally independent after the initial tape data inputs.

(3) Reviewing Edit Reports - Since the REJECTED RECORD REPORT (WATE01/SEWE01) is produced to list all "non-MARS" related input data (any non-operating & maintenance, debt service, or depreciation data) the user should review it to determine if any rejected records should actually be included as valid MARS input. If the rejected data are valid, a correction must be made to the FIN system CIP files and a revised input expense tape should be created by the City's MIS Department.

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```
DATE
Friday, June 11, 1982 6:11 PM
OK, SEG #DATAINPUT
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
DO YOU WANT TO ZERO FILES.  Y OR N
N

LAST ENTRY MONTH NUMBER WAS 02
TREATED WATER     = 00001581288
RPW WATER         = 00001579286

YOU MAY CORRECT THAT MONTH OR ENTER THE NEXT

PLEASE ENTER REPORT MONTH IN NUMERIC (01,02,03...)
02

ENTER WATER DATA IN THOUSANDS OF GALLONS
PLEASE ENTER FIGURE FOR TREATED WATER
1581288
AMOUNT ENTERED = 1581288

PLEASE ENTER FIGURE FOR RPW WATER
1581286
AMOUNT ENTERED = 1581286

        CONTENTS OF THE WATER DATA FILE

WMONTH= 02
WYEAR = 82

MONTH DATA
MO    YR      TREATED     RPW WATER  UNACCOUNTED
02+   81+   00001549228 00001532265 00000016963
03+   81+   00001906167 00001537236 00000368931
04+   81+   00002404078 00001816491 00000587587
05+   81+   00002473400 00002144837 00000328563
06+   81+   00002105681 00001822905 00000282776
07+   81+   00001986250 00001803168 00000183082
08+   81+   00001891468 00001686465 00000205003
09+   81+   00001793030 00001677334 00000115696
10+   81+   00002187330 00001662633 00000524697
11+   81+   00001887936 00001744085 00000143851
12+   81+   00001777499 00001671354 00000106145
01+   82+   00001687431 00001662910 00000024521
02+   82+   00001581288 00001581286 00000000002
```

Figure 5.

```
YTD DATA
MO    YR      TREATED     RPW WATER  UNACCOUNTED
02+   81+   00008810859 00008427116 00000383743
03+   81+   00010717026 00009964352 00000752674
04+   81+   00013121104 00011780843 00001340261
05+   81+   00015594504 00013925680 00001668824
06+   81+   00017700185 00015748585 00001951600
07+   81+   00019686435 00017551753 00002134682
08+   81+   00021577903 00019238218 00002339685
09+   81+   00023370933 00020915552 00002455381
10+   81+   00002187330 00001662633 00000524697
11+   81+   00004075266 00003406718 00000668548
12+   81+   00005852765 00005078072 00000774693
01+   82+   00007540196 00006740982 00000799214
02+   82+   00009121484 00008322268 00000799216

DO YOU HAVE MORE DATA TO ENTER!  Y OR N
N
OK,
```

Figure 5. (continued)

```
DATE
Thursday, June 10, 1982 5:55 PM
OK, ED RUN_FIRSTEDIT
EDIT
P99
.NULL.
COMO PRINT_FIRSTEDIT
/* RUN WATER REJECT, MERGE, AND EDIT PROGRAMS
DATE
FUTIL
CLEAN WATE0
Q
ED SAVWATE0
FILE WATE04
ED SAVWATE0
FILE WATE05
ED SAVWATE0
FILE WATE06
ED SAVWATE0
FILE WATE07
ED SAVWATE0
FILE WATE08
ED SAVWATE0
FILE WATE09
SEG #WREJECT
/
DATE
SEG #WMERGE
/
DATE
SEG #WEDIT
/
NO
DATE
SPOOL WATE01
SPOOL WATE02
SPOOL WATE03
DATE
COMO -E
LOGOUT
BOTTOM
FILE
RUN_FIRSTEDIT
Insufficient access rights.  RUN_FIRSTEDIT (OPENR)
?
Q
OK,
```

Figure 6.

```
DATE
Monday, June 14, 1982 4:59 PM
OK, ED PRINT_FIRSTEDIT
EDIT
P999
.NULL.
OK, /* RUN WATER REJECT, MERGE, AND EDIT PROGRAMS
OK, DATE
Monday, June 14, 1982 4:00 PM
OK, FUTIL
[FUTIL rev 18.3]
> CLEAN WATE0

> Q
OK, ED SAVWATE0
EDIT
FILE WATE04
OK, ED SAVWATE0
EDIT
FILE WATE05
OK, ED SAVWATE0
EDIT
FILE WATE06
OK, ED SAVWATE0
EDIT
FILE WATE07
OK, ED SAVWATE0
EDIT
FILE WATE08
OK, ED SAVWATE0
EDIT
FILE WATE09
OK, SEG #WREJECT
ENTER FILE ASSIGNMENTS:
> /
```

Figure 6. (continued)

```
FILE ASSIGNMENTS COMPLETE.
READING EXPENSE FILE
02500+ RECORDS COMPLETED
05000+ RECORDS COMPLETED
07500+ RECORDS COMPLETED
10000+ RECORDS COMPLETED
12500+ RECORDS COMPLETED
15000+ RECORDS COMPLETED
17500+ RECORDS COMPLETED
20000+ RECORDS COMPLETED
22500+ RECORDS COMPLETED
25000+ RECORDS COMPLETED
27500+ RECORDS COMPLETED
30000+ RECORDS COMPLETED
EXPENSE FILE AT END
READING BUDGET FILE
BUDGET FILE AT END
SORT IN PROGRESS
SORT COMPLETED
READY TO PRINT WORK FILE
REJECT PROGRAM COMPLETE
OK, DATE
Monday, June 14, 1982 4:22 PM
OK, SEG #WMERGE
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
READING EXPENSE FILE
02500+ RECORDS COMPLETED
05000+ RECORDS COMPLETED
07500+ RECORDS COMPLETED
10000+ RECORDS COMPLETED
12500+ RECORDS COMPLETED
15000+ RECORDS COMPLETED
17500+ RECORDS COMPLETED
20000+ RECORDS COMPLETED
22500+ RECORDS COMPLETED
25000+ RECORDS COMPLETED
27500+ RECORDS COMPLETED
30000+ RECORDS COMPLETED
EXPENSE FILE AT END
READING BUDGET FILE
BUDGET FILE AT END
SORT IN PROGRESS
SORT COMPLETED
MERGE PROGRAM COMPLETED
OK, DATE
Monday, June 14, 1982 4:43 PM
OK, SEG #WEDIT
ENTER FILE ASSIGNMENTS:
> /
```

Figure 6. (continued)

```
FILE ASSIGNMENTS COMPLETE.
EDIT IN PROGRESS
MAR 31, 1982
01000+ RECORDS COMPLETED
WORK-FILE AT END
ERROR COUNT IS EQUAL 000056+
IS THE REPORT TO BE PRINTED (YES OR NO)
NO
EDIT PROGRAM COMPLETE
OK, DATE
Monday, June 14, 1982 4:51 PM
OK, SPOOL WATE01
[SPOOL rev 18.3]
PRT013 spooled,  records:    93, name: WATE01
OK, SPOOL WATE02
[SPOOL rev 18.3]
PRT014 spooled,  records:     1, name: WATE02
OK, SPOOL WATE03
[SPOOL rev 18.3]
PRT015 spooled,  records:     6, name: WATE03
OK, DATE
Monday, June 14, 1982 4:51 PM
OK, COMO -E
BOTTOM
```

```
FILE
PRINT_FIRSTEDIT
OK, DATE
Monday, June 14, 1982 5:00 PM
OK,
```

Figure 6. (continued)

The MERGE DATA program (WATE02/SEWE02) sums records that have similar coding, matches the budget records with the corresponding expense records by ACTIVITY and OBJECT code, then prints a MERGE DATA report which lists: (1) the number of data elements from the input tapes, (2) the rejected records (items not be included in MARS), (3) the acceptable data records, and (4) the summed data records.

After the MERGE DATA report, the Department EDIT reports are printed. The user should review and correct the erroneous data listed in the EDIT report. The following two possible error conditions might exist as indicated in the report:

(1) "****" - incorrect coding number;
(2) "NN" - number on system table, but no name on file (normally means an inactive account was coded)

In either case the user should note on the edit report the correction, either to the input data or system tables, and instruct the operator to enter the correction into the system. Input data containing coding that was either never established in ACTIVITY table files or completely deleted (including the number and identifying name) will be rejected and the printed on the REJECTED DATA report. If, however, the table file contains a number without a corresponding name (INACTIVE), then the system places the data on the EDIT report. The purpose of maintaining the number in the tables without its name is to provide the user a chance to review the data for possible miscoding before it may be totally rejected by the system.

The Department user should, by using either the REJECTED DATA, MERGE or EDIT report be assured that MARS has received required data by balancing the accepted data to a FIN CIP file or balancing report provided by the City's MIS Department. Any discrepancies must be rectified before proceeding further.

NOTE: Dollar amounts should normally be changed by correcting the FIN system files and rerunning a new input tape.

(4) Correcting Input Data Errors - The type of data error that generally occurs is an expense is charged to the wrong account or cost center. To correct this type of error the utility programs called #CORRECTW (water) and #CORRECTS (sewer) is used.

Before starting the program, the operator should have a copy of the last edit report (WATE03 or SEWE03) with all the corrections marked. The operator calls the program by typing SEG #CORRECTW and /. The next step is to call a specific

record. This should be done in the same sequential order that the errors are listed. Failure to follow the order causes minor delays due to a longer search path for each record. To call a record, type the record number (4 digits including zeros). When found, the record will be displayed followed by the activity code. If it is correct, depress RETURN key and the object number will be displayed. The operator types the correct number when the error segment is displayed. A record can be corrected in a few seconds. In the example, Figure 7, the operator typed the record number ("144"), depressed the RETURN key after the activity code and object number, then typed the correct cost center ("0285"), followed by depressing the RETURN key twice, and finally typed No and YES ("N" and "Y").

When a correction is made, that record is completely reedited by the system. If an error still exists, it will be displayed. When the record is satisfactory, the program gives the operator the last OK prior to file entry, and then asks for the next record number. This process is repeated until all records are corrected. To terminate the program, depress the RETURN key. The program will then sum the records and dollar amount in the file. The total should remain the same if dollar entries were made correctly. This utility program may be used whenever required to correct the errors found in the input data.

(5) Correcting Table Files - The maintenance and verification of each of the systems (the Water Department system and the Sanitary Sewer Department system) tables files, which consist of the ACTIVITY, OBJECT, COST CENTER, AND (for the Water Department only) EXPENSE tables, is the responsibility of the system users.

Any correction, addition or deletion to these tables would normally take place during the time that the input data is being corrected, prior to producing monthly level reports. The user should determine the maintenance required for each table, then request the operator to run the program that updates the tables, #W-CHANGETABLES (for the Water Department) or #S-CHANGETABLES (for the Sanitary Sewer Department).

Each program will prompt the operator - "WHICH TABLE DO YOU WANT TO WORK WITH?". The operator may answer by typing the number that corresponds to the desired table.

"1" - (ACTIVITIES)
"2" - (OBJECT CODES)
"3" - (COST CENTERS)
"4" - (EXPENSES) (Water Department only)
"CR" (depress carriage return key) - EXIT PROGRAM

```
DATE
Monday, June 14, 1982 5:08 PM
OK, SEG #CORRECTW
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.

ENTER RECORD NUMBER (4 DIGITS PLEASE)
OR CR. TO EXIT PROGRAM.

0144

0144+  WATER DEPT.    = 5330
       ACTIVITY CODE =   02
       OBJECT NUMBER = 5204
       COST CENTER   = 0185
       EXPENSE TYPE  =    3
       RECORD TYPE   =    E
       EXPENSE AMOUNT=00000003804+

TYPE RETURN (IF OK) OR CORRECT DATA.

       ACTIVITY CODE =   02

       OBJECT NUMBER = 5204

       COST CENTER   = 0185

0285

       EXPENSE TYPE  =    3

       RECORD TYPE   =    E

DO YOU WANT TO CORRECT THE DOLLAR AMOUNT Y OR N!
N

****  CORRECTED RECORD  ****

0144+  WATER DEPT.    = 5330
       ACTIVITY CODE =   02
       OBJECT NUMBER = 5204
       COST CENTER   = 0285
       EXPENSE TYPE  =    3
       RECORD TYPE   =    E
       EXPENSE AMOUNT=00000003804+
```

Figure 7.

```
IS THIS CORRECTION OK  Y OR N
Y

ENTER RECORD NUMBER (4 DIGITS PLEASE)
OR CR. TO EXIT PROGRAM.


SUMMARY OF DATA.

     NUMBER OF RECORDS            01569+
     EXPENSE AMOUNT      00000163691571+
     BUDGET AMOUNT       00001461818751+

EDIT TASK COMPLETED.
OK,

    DATE
Monday, June 14, 1982 5:10 PM
OK,
```

Figure 7. (continued)

The program will then prompt - "ENTER DESIRED TASK". Depending upon what maintenance is required, the operator may type one of the following numbers:

"1" - (CHANGE RECORDS)
"2" - (ADD RECORDS)
"3" - (DELETE RECORDS)
"4" - (INACTIVATE RECORDS)
"5" - (PRINT RECORDS)
"CR" (depress carriage return key) - EXIT PROGRAM

(NOTE: the maximum number of characters for the table file names is 40, except for the expense records which are limited to 30 characters.)

The following are samples of the different tables: changing a table (Figure 8); adding a record (Figure 9); deleting a record (Figure 10); inactivating a record (Figure 11); and printing a record (Figure 12).

If the ACTIVITY table is selected for maintenance, the system will require only the last two (2) digits of the activity code to be entered (see Figure 12). The first four (4) digits of the activity code (5330 - Water Department; 5350 - Sanitary Sewer Department) are permanently established and cannot be modified without reprogramming MARS. (See Appendix C - the ACTIVITY table for the Water Department and Appendix D - the ACTIVITY table for the Sanitary Sewer Department.)

If the OBJECT table is selected for maintenance, the system will require a four (4) digit object code (see Figure 10). In addition, if the object code is entered for the initial time the operator must enter a Level III cost category code to match the new object code with the standard cost category. The first four (4) digits represent the FIN system object code and the next two (2) digits are the corresponding cost category number assigned to each object code. The following is an example of the OBJECT table:

```
   FIN
OBJECT   COST
 CODES  CATEGORY          TITLES
|----|--|----------------------|
110001EXECUTIVE SALARIES

120002SWORN/UNIFORM SAL

120102REGULAR SALARIES

120205TERMINAL LEAVE

120305SERVICE AWARDS

1204020UT OF GRADE PAY
```

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```
SEG #WCHANGETABLES
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
WHICH TABLE DO YOU WANT TO WORK WITH!

   1  ACTIVITIES
   2  OBJECT CODES
   3  COST CENTERS
   4  EXPENSES
  CR  EXIT PROGRAM
3
ENTER DESIRED TASK

   1  CHANGE RECORDS
   2  ADD RECORDS
   3  DELETE RECORDS
   4  INACTIVATE RECORDS
   5  PRINT RECORDS
  CR  EXIT TO TABLE SELECTION
1

ENTER COSTCTR NUMBER OR
PRESS RETURN TO EXIT TASK
09

NR     COSTCTR NAME
09     SATELLITE WELLS

AI AC SET 1 - 10
00 00 1011000001

DO YOU WANT TO CHANGE ALLOCATION PROCEDURES  Y OR N
Y
ENTER ADMIN INDEX  (2 DIGITS)
00
ENTER ADMIN COUNT  (2 DIGITS)
00
ENTER ADMIN SET  (10 DIGITS)
0011000001

NR     COSTCTR NAME
09     SATELLITE WELLS
```

Figure 8.

```
AI AC SET 1 - 10
00 00 0011000001

IS THAT CORRECT!  Y OR N
Y
COSTCTR 09 CHANGED

ENTER COSTCTR NUMBER OR
PRESS RETURN TO EXIT TASK
22

NR     COSTCTR NAME
22     HILLSBOROUGH RIVER  PLANT TREATMENT ADMN

AI AC SET 1 - 10
01 13 0000000000

DO YOU WANT TO CHANGE ALLOCATION PROCEDURES  Y OR N
Y
ENTER ADMIN INDEX  (2 DIGITS)
01
ENTER ADMIN COUNT  (2 DIGITS)
12

NR     COSTCTR NAME
22     HILLSBOROUGH RIVER  PLANT TREATMENT ADMN

AI AC SET 1 - 10
01 12 0000000000

IS THAT CORRECT!  Y OR N
Y
COSTCTR 22 CHANGED

ENTER COSTCTR NUMBER OR
PRESS RETURN TO EXIT TASK

ENTER DESIRED TASK

   1  CHANGE RECORDS
   2  ADD RECORDS
   3  DELETE RECORDS
   4  INACTIVATE RECORDS
   5  PRINT RECORDS
  CR  EXIT TO TABLE SELECTION
```

Figure 8. (continued)

```
WHICH TABLE DO YOU WANT TO WORK WITH!

   1  ACTIVITIES
   2  OBJECT CODES
   3  COST CENTERS
   4  EXPENSES
  CR  EXIT PROGRAM

OK,
```

Figure 8. (continued)

```
DATE
Thursday, June 10, 1982 6:22 PM
OK, SEG #SCHANGETABLES
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
WHICH TABLE DO YOU WANT TO WORK WITH!

    1  ACTIVITIES
    2  OBJECT CODES
    3  COST CENTERS
   CR  EXIT PROGRAM
2
ENTER DESIRED TASK

    1  CHANGE RECORDS
    2  ADD RECORDS
    3  DELETE RECORDS
    4  INACTIVATE RECORDS
    5  PRINT RECORDS
   CR  EXIT TO TABLE SELECTION
2

ENTER OBJECT NUMBER OR
PRESS RETURN TO EXIT TASK
1205
ENTER THE OBJECT NAME  (40 CHRS MAX)
SPECIAL PAY
ENTER CATEGORY NUMBER
02

NR CAT  OBJECT NAME
1205 02  SPECIAL PAY

IS THAT CORRECT!  Y OR N
Y
OBJECT 1205 ADDED

ENTER OBJECT NUMBER OR
PRESS RETURN TO EXIT TASK
```

Figure 9.

```
ENTER DESIRED TASK

   1  CHANGE RECORDS
   2  ADD RECORDS
   3  DELETE RECORDS
   4  INACTIVATE RECORDS
   5  PRINT RECORDS
 [CR] EXIT TO TABLE SELECTION

WHICH TABLE DO YOU WANT TO WORK WITH!

   1  ACTIVITIES
   2  OBJECT CODES
   3  COST CENTERS
 [CR] EXIT PROGRAM

OK,
```

Figure 9. (continued)

```
DATE
Thursday, June 10, 1982 6:24 PM
OK, SEG #SCHANGETABLES
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
WHICH TABLE DO YOU WANT TO WORK WITH!

   1  ACTIVITIES
   2  OBJECT CODES
   3  COST CENTERS
  CR  EXIT PROGRAM
2
ENTER DESIRED TASK

   1  CHANGE RECORDS
   2  ADD RECORDS
   3  DELETE RECORDS
   4  INACTIVATE RECORDS
   5  PRINT RECORDS
  CR  EXIT TO TABLE SELECTION
3

ENTER OBJECT NUMBER OR
PRESS RETURN TO EXIT TASK
1205

NR CAT  OBJECT NAME
1205 02  SPECIAL PAY

IS THIS THE RECORD TO DELETE  Y OR N
Y
OBJECT 1205 DELETED

ENTER OBJECT NUMBER OR
PRESS RETURN TO EXIT TASK

ENTER DESIRED TASK

   1  CHANGE RECORDS
   2  ADD RECORDS
   3  DELETE RECORDS
   4  INACTIVATE RECORDS
   5  PRINT RECORDS
  CR  EXIT TO TABLE SELECTION
```

Figure 10.

```
WHICH TABLE DO YOU WANT TO WORK WITH!

   1  ACTIVITIES
   2  OBJECT CODES
   3  COST CENTERS
  CR  EXIT PROGRAM

OK,'DATE
Thursday, June 10, 1982 6:25 PM
OK,'
```

Figure 10.(continued)

```
DATE
Thursday, June 10, 1982 6:29 PM
OK, SEG #SCHANGETABLES
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
WHICH TABLE DO YOU WANT TO WORK WITH!

    1  ACTIVITIES
    2  OBJECT CODES
    3  COST CENTERS
   CR  EXIT PROGRAM
3
ENTER DESIRED TASK

    1  CHANGE RECORDS
    2  ADD RECORDS
    3  DELETE RECORDS
    4  INACTIVATE RECORDS
    5  PRINT RECORDS
   CR  EXIT TO TABLE SELECTION
4

ENTER COSTCTR NUMBER OR
PRESS RETURN TO EXIT TASK
011

NR     COSTCTR NAME
011     NUCLEAR REACTORS

THIS NAME WILL BE SPACES
IS THAT CORRECT!  Y OR N
Y
COSTCTR 011 INACTIVATED

ENTER COSTCTR NUMBER OR
PRESS RETURN TO EXIT TASK
```

Figure 11.

```
ENTER DESIRED TASK

   1  CHANGE RECORDS
   2  ADD RECORDS
   3  DELETE RECORDS
   4  INACTIVATE RECORDS
   5  PRINT RECORDS
  CR  EXIT TO TABLE SELECTION

WHICH TABLE DO YOU WANT TO WORK WITH!

   1  ACTIVITIES
   2  OBJECT CODES
   3  COST CENTERS
  CR  EXIT PROGRAM
```

Figure 11.(continued)

```
DATE
Friday, June 11, 1982 9:33 AM
OK, SEG #WCHANGETABLES
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
WHICH TABLE DO YOU WANT TO WORK WITH!

   1  ACTIVITIES
   2  OBJECT CODES
   3  COST CENTERS
   4  EXPENSES
  CR  EXIT PROGRAM
1
ENTER DESIRED TASK

   1  CHANGE RECORDS
   2  ADD RECORDS
   3  DELETE RECORDS
   4  INACTIVATE RECORDS
   5  PRINT RECORDS
  CR  EXIT TO TABLE SELECTION
5

ENTER ACTIVITY NUMBER OR
PRESS RETURN TO EXIT TASK
01
ACTIVITY FILE PRINTED ON DISK
SPOOL WA-CO_ FOR COPY
ENTER DESIRED TASK

   1  CHANGE RECORDS
   2  ADD RECORDS
   3  DELETE RECORDS
   4  INACTIVATE RECORDS
   5  PRINT RECORDS
  CR  EXIT TO TABLE SELECTION

WHICH TABLE DO YOU WANT TO WORK WITH!

   1  ACTIVITIES
   2  OBJECT CODES
   3  COST CENTERS
   4  EXPENSES
  CR  EXIT PROGRAM

OK,          SPOOL WA-CO1  (PRINTS COPY)
```

Figure 12.

The categories are used to group multiple object codes together and print a general, descriptive similar title for the common object code. The cost categories are identified as:

| | |
|---|---|
| 01 - EXECUTIVE SALARIES | 07 - GENERAL |
| 02 - REGULAR SALARIES | 08 - REPAIR & MAINTENANCE |
| 03 - CETA | 09 - CHEMICAL |
| 04 - OTHER LABOR | 10 - POWER |
| 05 - BENEFITS - EXECUTIVE & REGULAR | 11 - INTEREST/DEBT SERVICE |
| 06 - BENEFITS - CETA | 12 - DEPRECIATION |

Appendix E lists the OBJECT table current in both systems. If the COST CENTER table is selected for maintenance, the system will require two (2) digits (for the Water Department), (the last two (2) digits of a four (4) digit number, the first two (2) digits relate to the last two (2) digits of the activity codes); and (for the Sanitary Sewer Department) three (3) digits. (See Figures 8 and 11.)

In addition, the Water Department MARS requires that the administrative cost center cost be allocated to other predetermined, non-administrative cost centers with the same activity, object, and expenses code as the original, administrative cost centers. Therefore, the Water Department cost center tables contain a numbering system that designates the administrative cost center and those cost centers receiving allocated administrative cost. (Appendix F and G list the COST CENTERS table currently used in MARS by the Water Department and the Sanitary Sewer Department.)

The following is an example of the Water Department COST CENTER table:

| CC | AI | AC | ADMIN. SET | COST CENTER NAME | |
|---|---|---|---|---|---|
| 01 | 00 | 00 | 0011000001 | SULPHUR SPRINGS | INTAKE @ PUMPING |
| 02 | 00 | 00 | 0011000001 | SULPHUR SPRINGS | TRANSMISSION |
| 03 | 00 | 00 | 1010000001 | HILLSBOROUGH RIVER | DAM |
| 04 | 00 | 00 | 1010000001 | HILLSBOROUGH RIVER | DAM GROUNDS |
| 05 | 00 | 00 | 1010000001 | HILLSBOROUGH RIVER | DAM HOUSE |
| 06 | 00 | 00 | 0011000001 | HILLSBOROUGH RIVER | INTAKE |
| 07 | 00 | 00 | 0011000001 | HILLBOROUGH RIVER | LOW LIFT PUMPING |

Note on the Water Department COST CENTER table a "CC" code, "AI" code, "AC" code, and "ADMIN.SET" code. The "CC" code is the 2-digit cost center number. The "AI" code designates the cost center as an administrative cost center and provides an administrative code number. The "AC" code defines the total number of cost centers to receive the allocated administrative cost. The "ADMIN.SET" inidcates which cost centers will receive allocated cost from specific administrative cost centers. For example, if the number "1" is in the first digit of the ten digit "ADMIN.SET" field, then that cost center will be the recipient of allocated cost from administrative cost center ("AI") number 1. If the number "1" is in the second digit of the "ADMIN.SET" field, then the cost center will be recipient of allocated cost for administrative cost center number 2, etc. Each of the numeric positions of the "ADMIN.SET" represents an administrative cost center - 10 positions = 10 administrative cost centers. Therefore, when the number "1" is present in any one of the 10 numeric positions, it indicates that the cost center is to be a recipient of the allocation of a specific administrative cost center.

Also, as Figure 9 shows, if a new cost center is added to the Water Department COST CENTER table, if the cost center is to be included as a recipient of any administrative cost center, that administrative cost center's "AC" code should be increased to include the new cost center.

If the EXPENSE table (Water Department only) is selected for up-dating, the system will require 2 digits. Appendix H is the existing EXPENSE table.

(6) Next Edit: If the first edit process did not have data errors this step is not required. If errors were encountered and corrected, the operator must execute the NEXT EDIT command file by typing: PH RUN_NEXTEDIT. Figure 13 is an example of the system printout of running the next edit.

This operation performs two essential functions: it checks all records again to insure that corrections were made properly, and it rechecks TABLE FILES to adapt to changes made between edits. When this operation is completed (approximately 5 to 9 minutes), the operator should review the next edit report (WATE04 or SEWE04). If the reports indicates "NO ERRORS", you may proceed with the RUN REPORTS process. However, if errors are reported, the correction and NEXT EDIT process must be repeated. They can be repeated as many times as required to get an error-free report. Note that subsequent reports will have the same names, WATE04 or SEWE04.

```
DATE
Thursday, June 10, 1982 5:55 PM
OK, ED RUN_NEXTEDIT
EDIT
P99
.NULL.
COMO PRINT_NEXTEDIT
/* RERUN WATER EDIT PROGRAM
DATE
FUTIL
CLEAN WATE04
Q
SEG #WEDIT
/
NO
DATE
SPOOL WATE04
DATE
COMO -E
LOGOUT
BOTTOM
FILE
RUN_NEXTEDIT
Insufficient access rights.  RUN_NEXTEDIT (OPENR)
?
Q
OK,
```

Figure 13.

```
DATE
Monday, June 14, 1982 4:52 PM
OK, ED PRINT_NEXTEDIT
EDIT
P200
.NULL.
OK, /* RERUN SEWER EDIT PROGRAM
OK, DATE
Thursday, June 10, 1982 1:01 PM
OK, FUTIL
[FUTIL rev 18.3]
> CLEAN SEWE04

> Q
OK, SEG #SEDIT
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
EDIT IN PROGRESS
01000+ RECORDS COMPLETED
02000+ RECORDS COMPLETED
03000+ RECORDS COMPLETED
WORK-FILE AT END
ERROR COUNT = 0
NUMBER OF RECORDS EDITED = 03920+
IS THE REPORT TO BE PRINTED (YES OR NO)
NO
EDIT PROGRAM COMPLETE
OK, DATE
Thursday, June 10, 1982 1:27 PM
OK, SPOOL SEWE04
[SPOOL rev 18.3]
PRT002 spooled,  records:     1, name: SEWE04
OK, DATE
Thursday, June 10, 1982 1:27 PM
OK, COMO -E
BOTTOM
FILE
PRINT_NEXTEDIT
OK, DATE
Monday, June 14, 1982 4:52 PM
OK,
```

Figure 13. (continued)

d. Printing Reports

(1) Procedure: The RUN_REPORTS command file executes the majority of the MARS processing, therefore it is imperative that this command is not executed until the input files are absolutely free of errors. The process takes an hour or more of computation and printing time to perform the functional tasks of: (1) allocating administrative costs (Water Department only); (2) resorting the file to place edited and allocated records in their proper positions; (3) preparing the master file (cost matrix file) for acceptance of the new months; (4) adding data to the master file and expanding it as necessary for new record types; and (5) finally performing the numerous calculations and sorts necessary to print the four management level reports.

To execute the reporting task, type: PH RUN_REPORTS. Figure 14 is an example of a system printout of running reports.

If it is the beginning of a new fiscal year, type: PH RUN_NEWYEAR instead of PH RUN_REPORTS. The RUN_NEWYEAR command file performs all the tasks of RUN_REPORTS plus those additional steps required to sum and zero files with year-to-information. For the special tasks of rerunning a month or starting a new year, refer to the Special Operational Procedures section of this document.

(2) Reviewing Reports: Each level report should be reviewed for completeness. The totals of each report should balance to the corrected data amounts entering the system. After the reports have been printed (Level I through IV) they should be provided to the Department's Administration Manager. The normal distribution is as follows:

| Report | Personnel |
|---|---|
| LEVEL I | (1) Department Director/Manager |
| LEVEL II | (1) Department Director/Manager |
| | (2) Administrative Manager |
| | (3) Budget Accountant |
| LEVEL III | (1) Department Director/Manager |
| LEVEL IV | (1) Administrative Manager |
| | (2) Production/Department Managers |
| | (3) Department Accountant |

However, it is the option of the Department Director to distribute the report to other City Personnel, such as the Level I report could be provided to the Administrator - Water Resources & Public Works.

```
DATE
Thursday, June 10, 1982 4:09 PM
OK, ED RUN_REPORTS
EDIT
P99
.NULL.
COMO PRINT_REPORTS
/* THIS PHANTOM UPDATES THE CMF FILE AND PRINTS ALL REPORTS
/* RUN SECOND SORT
SEG #SORTS2
/
/* RUN ZERO AND UP DATE PROGRAMS
DATE
SEG #SZERO
/
MONTH END
DATE
SEG #SUPDT
/
NO
/* RUN SEWER REPORT PROGRAMS I THRU IV.
DATE
SEG #SINFO
/
NO
DATE
FUTIL
CLEAN SEWE05
CLEAN SEWE06
CLEAN SEWE07
CLEAN SEWE08
CLEAN SEWE09
Q
SEG #SRPT1
/
DATE
SEG #SRPT2
/
DATE
SEG #SRPT3
/
```

Figure 14.

```
.
DATE
SEG #SRPT4
/
DATE
SEG #SRPT5
/
DATE
SPOOL SEWE05
SPOOL SEWE06
SPOOL SEWE07
SPOOL SEWE08
SPOOL SEWE09
DATE
COMO -E
C ALL
FUTIL
CLEAN SRT#
CLEAN DAM#
Q
LOGOUT
BOTTOM
FILE
RUN_REPORTS
OK,
```

Figure 14. (continued)

```
DATE
Monday, June 14, 1982 4:52 PM
OK, ED PRINT_REPORTS
EDIT
P200
.NULL.
OK, /* THIS PHANTOM UPDATES THE CMF FILE AND PRINTS ALL REPORTS
OK, /* RUN SECOND SORT
OK, SEG #SORTS2
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
STARTING SORT OF THE ALLOCATED OUTPUT
00003921+
ENDING SORT
ALLOCATE  I  2  NORMAL END OF JOB
OK, /* RUN ZERO AND UP DATE PROGRAMS
OK, DATE
Thursday, June 10, 1982 1:52 PM
OK, SEG #SZERO
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
ENTER METHOD OF ZEROING
(MONTH END, NEW YEAR, RERUN MONTH, RERUN YEAR)
MONTH END
RECORD COUNT = 00006328+
OK, DATE
Thursday, June 10, 1982 1:59 PM
OK, SEG #SUPDT
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
ALLOCATED WORK-FILE AT END
IF UPDATED COST-MATRIX-FILE TO BE PRINTED
ENTER YES, ELSE PRESS RETURN
NO
COST MATRIX UPDATE COMPLETED
OK, /* RUN SEWER REPORT PROGRAMS I THRU IV.
OK, DATE
Thursday, June 10, 1982 2:07 PM
OK, SEG #SINFO
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
DO YOU WANT TO ERASE TO ZERO
FILE SEWERL1...YES OR NO
WHEN NOT SURE, PRESS RETURN
NO
```

Figure 14. (continued)

```
ENTERING PROCESS-MATRIX
RECORD COUNT = 00007144+
TOTAL AMOUNT = 00176187648+
GOOD COST CENTER = 00119642495+
ACCT 1 = 00016719050+
ACCT 2 = 00049191889+
ACCT 3 = 00000000000+
ACCT 4 = 00053731556+
ACCT 5 = 00024065256+
ACCT 6 = 00032479897+
YTD-AMOUNT      = 00841566711+
BUDGET-AMT (2) = 01834261034+
BEGIN PROCESS TIME
READY TO WRITE WATER-REC
READY TO WRITE WATER6
OK, DATE
Thursday, June 10, 1982 2:13 PM
OK, FUTIL
[FUTIL rev 18.3]
> CLEAN SEWE05

> CLEAN SEWE06

> CLEAN SEWE07

> CLEAN SEWE08

> CLEAN SEWE09

> Q
OK, SEG #SRPT1
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
REPORT I PROGRAM COMPLETED
OK, DATE
Thursday, June 10, 1982 2:14 PM
OK, SEG #SRPT2
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
STARTED PART-A SORT
PRINTING PART-A REPORT
OK, DATE
Thursday, June 10, 1982 2:25 PM
OK, SEG #SRPT3
```

Figure 14. (continued)

```
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
STARTED SORTING
PRINTING REPORT III
REPORT III COMPLETED
OK, DATE
Thursday, June 10, 1982 2:45 PM
OK, SEG #SRPT4
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
COST MATRIX FILE AT END
SORT-FILE RETURNED
ACQUISITION SORT COMPLETED
SORTED FILE AT END
0
OK, DATE
Thursday, June 10, 1982 2:58 PM
OK, SEG #SRPT5
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
COST MATRIX FILE AT END
SORT-FILE RETURNED
ACQUISITION SORT COMPLETED
SORTED FILE AT END
0
OK, DATE
Thursday, June 10, 1982 3:20 PM
OK, SPOOL SEWE05
[SPOOL rev 18.3]
PRT002 spooled,  records:    2, name: SEWE05
OK, SPOOL SEWE06
[SPOOL rev 18.3]
PRT003 spooled,  records:   57, name: SEWE06
OK, SPOOL SEWE07
[SPOOL rev 18.3]
PRT004 spooled,  records:    3, name: SEWE07
OK, SPOOL SEWE08
[SPOOL rev 18.3]
PRT005 spooled,  records:    1, name: SEWE08
OK, SPOOL SEWE09
[SPOOL rev 18.3]
PRT006 spooled,  records:    1, name: SEWE09
OK, DATE
Thursday, June 10, 1982 3:20 PM
OK, COMO -E
BOTTOM
FILE
PRINT_REPORTS
OK,
```

Figure 14. (continued)



Figure 14. (continued)

e. Level VI reports

Level VI can be executed whenever required by typing: SEG #WRPT6 or SEG #SRPT6 followed by a slash / for file assignments.

Each time this program is executed, the operator should spool the report to the printer by typing: CO SPOOL_RPT6 . If the operator fails to spool the report before executing the program again, he must type: CO SPOOL_RPT6 to get the first report, and SPOOL RPT602 to get the second (SPOOL RPT603 for the third). He should also delete RPT602, etc. after spooling.

Note that "CO" is the command and "SPOOL" is part of the file name; in the second case "SPOOL" is a command and "RPT602" is the file name.

4. SPECIAL OPERATIONAL PROCEDURES

a. Initial System Start - It is not anticipated that the system will ever have to be restarted, however, in the event of total system destruction it would require several days for a system analyst to recreate the many indexed and unseen background files (previous year data files) within the system.

In the event of a restart because of invalid numerical data input, three steps are required:

(1) Execute the #DATAINPUT program and answer the question "DO YOU WANT TO ZERO THE FILES?" with YES. Then reenter the appropriate data. See Figure 15 for example of #DATAINPUT (zeroing files).

(2) Execute the #WINFO or #SINFO program and zero the files. Also reenter the starting month number.

(3) Delete the master file COSTW for Water Department or COSTS for Sanitary Sewer Department with the following procedure:
Type: CO CREATE_NEWCMF
Prompt: Figure 16 is a sample of the screen display that occurs when CREATE NEWCMF is executed.

The command recreates the master file with zero records. Once these 3 steps have been completed, MARS can be run using the standard operational procedures.

b. Rerun of Current Month - In the event that data errors get into the master file, they can be easily corrected provided the error was found prior to running the next months data. To correct this type of error, repeat the error correction procedures, run NEXTEDIT and then run the command file RERUN_REPORTS by typing: PH RERUN_REPORTS, instead of the RUN_REPORTS command.

```
DATE
Friday, June 11, 1982 6:14 PM
OK, SEG #DATAINPUT
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
DO YOU WANT TO ZERO FILES.  Y OR N
Y
ENTIRE FILE WILL BE ZEROS. IS THAT CORRECT. Y OR N
Y
PLEASE ENTER REPORT MONTH IN NUMERIC (01,02,03...)
       FOR THE NEXT STARTING MONTH
02
ENTER YEAR NUMBER ( 2 DIGITS )
82
THE FILE HAS BEEN ZEROED


DO YOU HAVE MORE DATA TO ENTER!  Y OR N
Y

LAST ENTRY MONTH NUMBER WAS 02
TREATED WATER     = 00000000000
RPW WATER         = 00000000000

YOU MAY CORRECT THAT MONTH OR ENTER THE NEXT

PLEASE ENTER REPORT MONTH IN NUMERIC (01,02,03...)
02

ENTER WATER DATA IN THOUSANDS OF GALLONS
PLEASE ENTER FIGURE FOR TREATED WATER
1861288
AMOUNT ENTERED = 1861288

PLEASE ENTER FIGURE FOR RPW WATER
1579286
AMOUNT ENTERED = 1579286

        CONTENTS OF THE WATER DATA FILE

WMONTH= 02
WYEAR = 82
```

Figure 15.

```
MONTH DATA
MO    YR      TREATED      RPW WATER   UNACCOUNTED
02+   81+  00000000000  00000000000  00000000000
03+   81+  00000000000  00000000000  00000000000
04+   81+  00000000000  00000000000  00000000000
05+   81+  00000000000  00000000000  00000000000
06+   81+  00000000000  00000000000  00000000000
07+   81+  00000000000  00000000000  00000000000
08+   81+  00000000000  00000000000  00000000000
09+   81+  00000000000  00000000000  00000000000
10+   81+  00000000000  00000000000  00000000000
11+   81+  00000000000  00000000000  00000000000
12+   81+  00000000000  00000000000  00000000000
01+   82+  00000000000  00000000000  00000000000
02+   82+  00001861288  00001579286  00000282002

YTD DATA
MO    YR      TREATED      RPW WATER   UNACCOUNTED
02+   81+  00000000000  00000000000  00000000000
03+   81+  00000000000  00000000000  00000000000
04+   81+  00000000000  00000000000  00000000000
05+   81+  00000000000  00000000000  00000000000
06+   81+  00000000000  00000000000  00000000000
07+   81+  00000000000  00000000000  00000000000
08+   81+  00000000000  00000000000  00000000000
09+   81+  00000000000  00000000000  00000000000
10+   81+  00000000000  00000000000  00000000000
11+   81+  00000000000  00000000000  00000000000
12+   81+  00000000000  00000000000  00000000000
01+   82+  00000000000  00000000000  00000000000
02+   82+  00001861288  00001579286  00000282002


DO YOU HAVE MORE DATA TO ENTER!  Y OR N
Y

LAST ENTRY MONTH NUMBER WAS 02
TREATED WATER     = 00001861288
RPW WATER         = 00001579286

YOU MAY CORRECT THAT MONTH OR ENTER THE NEXT

PLEASE ENTER REPORT MONTH IN NUMERIC (01,02,03...)
02
```

Figure 15.(continued)

```
ENTER WATER DATA IN THOUSANDS OF GALLONS
PLEASE ENTER FIGURE FOR TREATED WATER
1581288
AMOUNT ENTERED = 1581288

PLEASE ENTER FIGURE FOR RPW WATER
1579286
AMOUNT ENTERED = 1579286

        CONTENTS OF THE WATER DATA FILE

WMONTH= 02
WYEAR = 82

MONTH DATA
MO    YR      TREATED     RPW WATER  UNACCOUNTED
02+   81+   00000000000 00000000000 00000000000
03+   81+   00000000000 00000000000 00000000000
04+   81+   00000000000 00000000000 00000000000
05+   81+   00000000000 00000000000 00000000000
06+   81+   00000000000 00000000000 00000000000
07+   81+   00000000000 00000000000 00000000000
08+   81+   00000000000 00000000000 00000000000
09+   81+   00000000000 00000000000 00000000000
10+   81+   00000000000 00000000000 00000000000
11+   81+   00000000000 00000000000 00000000000
12+   81+   00000000000 00000000000 00000000000
01+   82+   00000000000 00000000000 00000000000
02+   82+   00001581288 00001579286 00000002002

YTD DATA
MO    YR      TREATED     RPW WATER  UNACCOUNTED
02+   81+   00000000000 00000000000 00000000000
03+   81+   00000000000 00000000000 00000000000
04+   81+   00000000000 00000000000 00000000000
05+   81+   00000000000 00000000000 00000000000
06+   81+   00000000000 00000000000 00000000000
07+   81+   00000000000 00000000000 00000000000
08+   81+   00000000000 00000000000 00000000000
09+   81+   00000000000 00000000000 00000000000
10+   81+   00000000000 00000000000 00000000000
11+   81+   00000000000 00000000000 00000000000
12+   81+   00000000000 00000000000 00000000000
01+   82+   00000000000 00000000000 00000000000
02+   82+   00001581288 00001579286 00000002002


DO YOU HAVE MORE DATA TO ENTER!  Y OR N
N
OK,
```

Figure 15. (continued)

```
DATE
Thursday, June 10, 1982 4:13 PM
OK, ED CREATE_NEWCMF
EDIT
P99
.NULL.
COMO CHECK_NEWCMF
/* THIS COMMAND FILE DELETES THE THE CMF FILE AND A CREATES
/* A NEW CMF FILE WITH NO RECORDS.
DATE
FUTIL
TREDEL COSTS
Q
CREATK
YES
COSTS
YES
NO
A
B 16
31

DATE
COMO -E
BOTTOM
FILE
CREATE_NEWCMF
OK,
```

Figure 16.

```
DATE
Monday, June 14, 1982 4:50 PM
OK, ED CHECK_NEWCMF
EDIT
P200
.NULL.
OK, /* THIS COMMAND FILE DELETES THE THE CMF FILE AND A CREATES
OK, /* A NEW CMF FILE WITH NO RECORDS.
OK, DATE
Monday, March 22, 1982 8:34 AM
OK, FUTIL
[FUTIL rev 18.1]
> TREDEL COSTS
> Q
OK, CREATK
[CREATK rev 18.2]

MINIMUM OPTIONS? YES

FILE NAME? COSTS
NEW FILE? YES
DIRECT ACCESS? NO

DATA SUBFILE QUESTIONS

PRIMARY KEY TYPE: A
PRIMARY KEY SIZE = : B 16
DATA SIZE = : 31

SECONDARY INDEX

INDEX NO.?

SETTING FILE LOCK TO N READERS AND N WRITERS
OK, DATE
Monday, March 22, 1982 8:34 AM
OK, COMO -E
BOTTOM
FILE
CHECK_NEWCMF
OK, DATE
Monday, June 14, 1982 4:51 PM
OK,
```

Figure 16. (continued)

c. Rerun of Level I report - In the event that a production flow error causes the Level I report to be in error, it is not necessary to rerun all reports. The correct procedure is to reenter the flow data using the #DATAINPUT program, and then execute the RERUN RPT1 command by typing: PH RERUN_RPT1. The output report WATE05 or SEWE05 will be reprinted automatically. Figure 17 is an example of system printout of rerun of Level I.

d. Rerun of Previous Month - If an input data error is not found for several months, two possible procedures are available. The simplest way would be to make adjusting entries in the current month for the accounts in error.

The alternate method involves the lengthy procedure of reloading the magnetic tape with the backup data for the month in error, correct the error, and then proceed with the normal process of running each subsequent month until current.

e. Starting A New Fiscal Year - To start a new fiscal year substitute the RUN REPORTS command file with the RUN NEWYEAR command file and the system will take care of the tedious details of closing out year-to-date files. In the event of data error getting past the edits and into the master file - simply correct the errors, run NEXTEDIT followed by the RERUN_NEWYEAR command file. Type: PH RERUN_NEWYEAR.

f. File Maintenance - At the end of each month's operations, insure that all files are closed, then type: CO CLEAN_MISFILES. Figure 18 is a sample display of this task.

g. System Back Up - The Prime system back up procedures currently being used by City personnel are satisfactory for day to day operations in the event of a computer failure.

MARS has additional back up requirements. A copy of the entire MARS should be transferred to magnetic tape each time a month's reports have been completed. The tapes (at least 12) should be maintained separately and carefully labeled by month.

Proper back up procedures will permit operators to obtain extra copies of previous reports and, if required in the event of a major input data error, restart the system at a prior month.

h. System Recovery Procedures - There is always a finite probability that the computer will fail during an operational run. Power loss, disk overflow, head crashes, command file interruption, operator error, and electronic failures all can cause premature termination of MARS. If this occurs, the operator must carefully analyze the situation prior to attempting corrective action. The following paragraphs outline the recommended procedures for system recovery.

```
DATE
Thursday, June 10, 1982 4:11 PM
OK, ED RERUN_RPT1
EDIT
P99
.NULL.
COMO PRINT_RERUN_RPT1
/* RERUN SEWER-INFO AND SEWER-RPT1
DATE
SEG #SINFO
/
NO
DATE
FUTIL
CLEAN SEWE05
Q
SEG #SRPT1
/
DATE
SPOOL SEWE05
DATE
COMO -E
LOGOUT
BOTTOM
FILE
RERUN_RPT1
OK,
```

```
DATE
Monday, June 14, 1982 4:55 PM
OK, ED PRINT_RERUN_RPT1
P200EDIT

.NULL.
OK, /* RERUN SEWER-INFO AND SEWER-RPT1
OK, DATE
Friday, March 26, 1982 10:20 AM
OK, SEG #SINFO
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
DO YOU WANT TO ERASE TO ZERO
FILE SEWERL1...YES OR NO
WHEN NOT SURE, PRESS RETURN
NO
```

Figure 17.

```
ENTERING PROCESS-MATRIX
RECORD COUNT = 00003687+
TOTAL AMOUNT = 00160520460+
GOOD COST CENTER = 00104147128+
ACCT 1 = 00019031842+
ACCT 2 = 00045701153+
ACCT 3 = 00000000000+
ACCT 4 = 00039414133+
ACCT 5 = 00024065257+
ACCT 6 = 00032308075+
YTD-AMOUNT      = 00160520460+
BUDGET-AMT (2) = 01924835714+
BEGIN PROCESS TIME
READY TO WRITE WATER-REC
READY TO WRITE WATER6
OK, DATE
Friday, March 26, 1982 10:22 AM
OK, FUTIL
[FUTIL rev 18.1]
> CLEAN SEWE05

> Q
OK, SEG #SRPT1
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.
REPORT I PROGRAM COMPLETED
OK, DATE
Friday, March 26, 1982 10:22 AM
OK, SPOOL SEWE05
[SPOOL rev 18.2]
PRT001 spooled,  records:     2, name: SEWE05
OK, DATE
Friday, March 26, 1982 10:22 AM
OK, COMO -E
BOTTOM
FILE
PRINT_RERUN_RPT1
OK,
```

Figure 17. (continued)

```
DATE
Friday, June 11, 1982 6:06 PM
OK, CO CLEAN_MISCFILES
OK, DATE
Friday, June 11, 1982 6:07 PM
OK, FUTIL
[FUTIL rev 18.3]
> CLEAN L_

> CLEAN B_

> CLEAN DAM#

> CLEAN SRT#

> CLEAN CORRO

> CLEAN RPT60

> Q
OK, DATE
Friday, June 11, 1982 6:09 PM
OK,
End of file. Cominput. (Input from terminal.)
```

Figure 18.

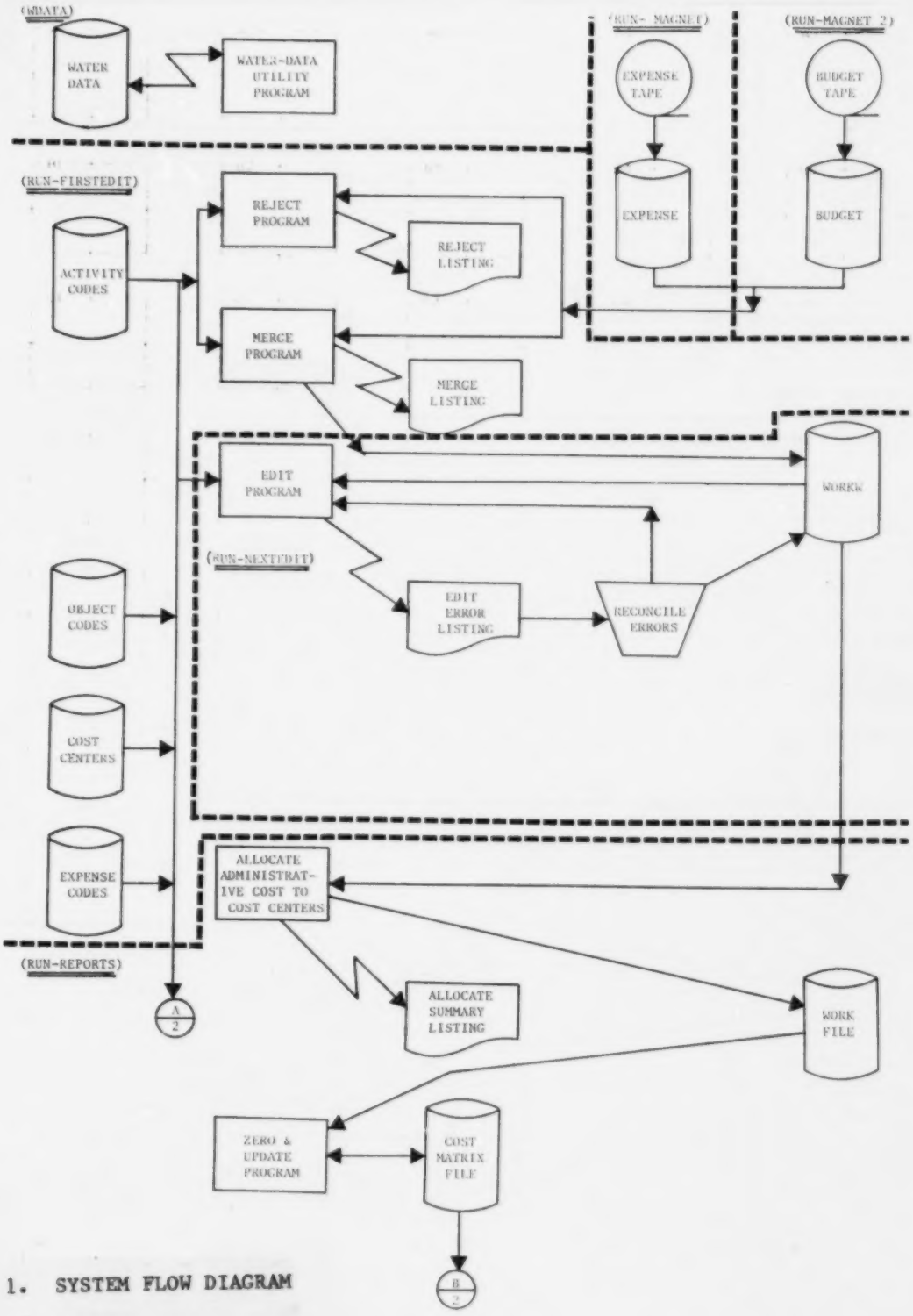
The first step, after computer restart, is to determine if disk files are accessible and where exactly in the computation process did the system fail. Note that each command file records its progress, including exact times, on a print file. See section C "MARS SYSTEM DETAILS", subsection 2 for print file names. A review of the appropriate file will normally reveal the time and position of the system failure.

The next step is to "think" before acting. Failure to do so can cause further file damage and excessive time to recover. If the disk files and programs are accessible, try one of the following:

| IF FAILURE OCCURED DURING | RECOVERY PROCEDURE |
|---|---|
| 1. RUN_MAGNET | execute RUN_MAGNET again |
| 2. RUN_MAGNET2 | execute RUN_MAGNET and RUN_MAGNET2 again |
| 3. RUN_FIRSTEDIT | execute RUN_FIRSTEDIT again |
| 4. RUN_NEXTEDIT | execute RUN_NEXTEDIT again, if no errors - proceed, else correct or RUN_FIRSTEDIT again |
| 5. RUN_REPORTS | a. If failure occurred prior to zeroing the master file, RUN_REPORTS again.<br>b. If failure occurred during zeroing or updating the master file, follow the inaccessible file procedures.<br>c. If failure occurred after master file updating, it is <u>not</u> necessary to use the RERUN_REPORTS command file. The fastest recovery procedure is to execute the report programs individually. For example, if all reports were completed except Level IV:<br>type: <u>DELETE WATE08</u><br>type: <u>SEG #WRPT4</u><br>type: <u>/</u><br>type: SPOOL WATE05<br>SPOOL WATE06<br>SPOOL WATE07<br>SPOOL WATE08 |

If the disk files are inaccessible, or the system stopped during master file zeroing or updating, the operator must reload the disk from the back-up magnetic tape. Do not arbitrarily write over the entire MARS directory if all that is required is to copy the master file (COSTW or COSTS). Recovering the master file will allow the operator to continue the processing with RUN_REPORTS, while rewriting the directory will require the operator to repeat the entire monthly process.

## C. MARS SYSTEM DETAIL




### 1. SYSTEM FLOW DIAGRAM

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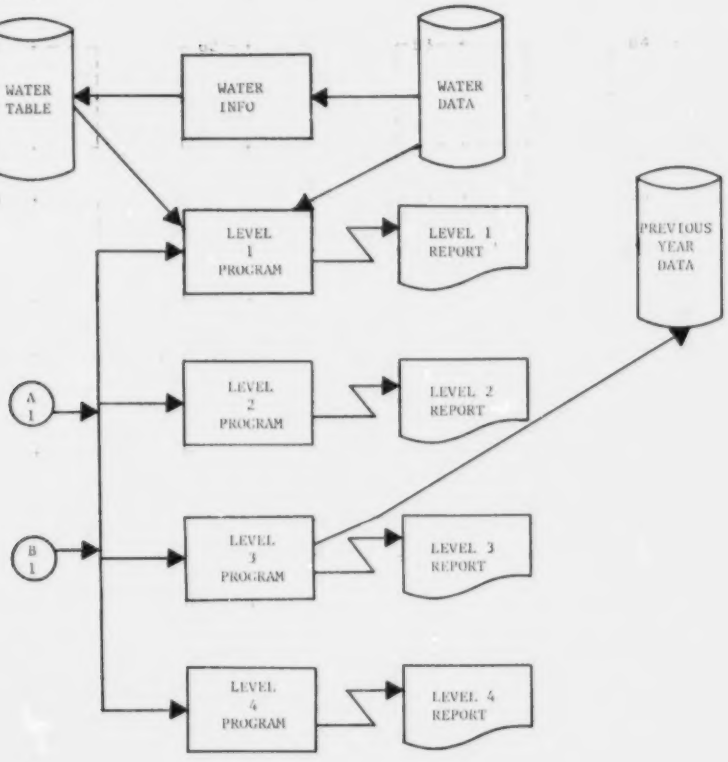
IBM Flowcharting Worksheet

Programmer: _____ Program No.: _____ Date: _____ Page: _____

Chart ID: ___ Chart Name: _____ Program Name: _____



## 2. LIST OF COMMAND FILES AND PROGRAMS

WATER DEPARTMENT: COMMAND FILES

| NO. | COMMAND FILE NAME | RUN NAME | PRINT FILE |
|---|---|---|---|
| 1. | RUN_MAGNET | NOTE 1 | VIDEO & PRINT_MAGNET |
| 2. | RUN_MAGNET2 | NOTE 1 | VIDEO & PRINT_MAGNET2 |
| 3. | RUN_FIRSTEDIT | NOTE 2 | PRINT_FIRSTEDIT |
| 4. | RUN_NEXTEDIT | NOTE 2 | PRINT_NEXTEDIT |
| 5. | RUN_REPORTS | NOTE 2 | PRINT_REPORTS |

WATER DEPARTMENT: UTILITY COMMAND FILES

| NO. | COMMAND FILE NAME | RUN NAME | PRINT FILE |
|---|---|---|---|
| 6. | RERUN_RPT1 | NOTE 1 | VIDEO & PRINT_RERUNRPT1 |
| 7. | RERUN_REPORTS | NOTE 2 | PRINT_RERUNRPTS |
| 8. | SPOOL_RPT6 | NOTE 1 | VIDEO |
| 9. | CLEAN-MISCFILES | NOTE 1 | VIDEO |
| 10. | RUN_NEWYEAR | NOTE 2 | PRINT_NEWYEAR |
| 11. | RERUN_NEWYEAR | NOTE 2 | PRINT_RERUNYEAR |
| 12. | CREATE_NEWCMF | NOTE 1 | VIDEO |

NOTE 1: To execute type: CO and COMMAND FILE NAME
NOTE 2: To execute type: PH and COMMAND FILE NAME

WATER DEPARTMENT: OPERATIONAL PROGRAMS

| NO. | SOURCE PROGRAM | RUN PROGRAM | PRINT FILE |
|---|---|---|---|
| 13. | CHECK-DATA | #CHECKDATA | VIDEO |
| 14. | WATERREJECT | #WREJECT | WATE01 |
| 15. | WATERMERGE | #WMERGE | WATE02 |
| 16. | WATEREDIT | #WEDIT | WATE03 & WATE04 |
| 17. | WPERCENT | #WPRCNT | PROD01 |
| 18. | ALLOC1 | #ALLOC1 | ALLØ1 |
| 19. | ALLOC2 | #ALLOC2 | ALLØ2 |
| 20. | WATERZERO | #WZERO | NONE |
| 21. | WATERUPDT | #WUPDT | NONE |
| 22. | WATER-INFO | #WINFO | NONE |
| 23. | WATER-RPT1 | #WRPT1 | WATE05 |
| 24. | WATER-RPT2 | #WRPT2 | WATE06 |
| 25. | WATER-RPT3 | #WRPT3 | WATE07 |
| 26. | WATER-RPT4 | #WRPT4 | WATE08 |
| 27. | not used | - | - |
| 28. | WATER-RPT6 | #WRPT6 | VIDEO & RPT601 |

WATER DEPARTMENT: UTILITY PROGRAMS

| NO. | SOURCE PROGRAM | RUN PROGRAM | PRINT FILE |
|---|---|---|---|
| 29. | WATER-DATA | #DATAINPUT | VIDEO |
| 30. | CORRECT-WORKW | #CORRECTW | VIDEO |
| 31. | WA-CHANGETABLES | #WCHANGETABLES | VIDEO & WA-C01 |
| 32. | CREATE-CMFW | #CRCMFW | VIDEO |
| 33. | WA-BUILDTABLES | #WBUILDTABLES | VIDEO |
| 34. | PRINT-CMFW | #PRNT-CMFW | VIDEO |
| 35. | WA-ACTVTABLE | NOTE 3 | - |
| 36. | WA-ACCTTABLE | NOTE 3 | - |
| 37. | WA-COSTTABLE | NOTE 3 | - |

NOTE 3: These tables are part of the source code for WA-BUILDTABLES.

SANITARY SEWER DEPARTMENT: COMMAND FILES

| NO. | COMMAND FILE NAME | RUN NAME | PRINT FILE |
|---|---|---|---|
| 1.* | RUN_MAGNET | NOTE 1 | VIDEO & PRINT_MAGNET |
| 2.* | RUN_MAGNET2 | NOTE 1 | VIDEO & PRINT_MAGNET2 |
| 43. | RUN_FIRSTEDIT | NOTE 2 | PRINT_FIRSTEDIT |
| 44. | RUN_NEXTEDIT | NOTE 2 | PRINT_NEXTEDIT |
| 45. | RUN_REPORTS | NOTE 2 | PRINT_REPORTS |

* Same command file used for both the Water Department and the Sanitary Sewer Department.

SANITARY SEWER DEPARTMENT: UTILITY COMMAND FILES

| NO. | COMMAND FILE NAME | RUN NAME | PRINT FILE |
|---|---|---|---|
| 46. | RERUN_RPT1 | NOTE 1 | VIDEO & PRINT_RERUNRPT1 |
| 47. | RERUN_REPORTS | NOTE 2 | PRINT_RERUNRPTS |
| 48. | SPOOL_RPT6 | NOTE 1 | VIDEO |
| 49. | CLEAN-MISCFILES | NOTE 1 | VIDEO |
| 50. | RUN_NEWYEAR | NOTE 2 | PRINT_NEWYEAR |
| 51. | RERUN_NEWYEAR | NOTE 2 | PRINT_RERUNYEAR |
| 52. | CREATE_NEWCMF | NOTE 1 | VIDEO |

NOTE 1: To execute type: CO and COMMAND FILE NAME
NOTE 2: To execute type: PH and COMMAND FILE NAME

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SANITARY SEWER DEPARTMENT: OPERATIONAL PROGRAMS

| NO. | SOURCE PROGRAM | RUN PROGRAM | PRINT FILE |
|---|---|---|---|
| 13.* | CHECK-DATA | #CHECKDATA | VIDEO |
| 54. | SEWERREJECT | #SREJECT | SEWE01 |
| 55. | SEWERMERGE | #SMERGE | SEWE02 |
| 56. | SEWEREDIT | #SEDIT | SEWE03 & SEWE04 |
| 57. | not used | - | - |
| 58. | not used | - | - |
| 59. | SORTS2 | #SORTS2 | VIDEO |
| 60. | SEWERZERO | #SZERO | NONE |
| 61. | SEWERUPDT | #SUPDT | NONE |
| 62. | SEWER-INFO | #SINFO | NONE |
| 63. | SEWER-RPT1 | #SRPT1 | SEWE05 |
| 64. | SEWER-RPT2 | #SRPT2 | SEWE06 |
| 65. | SEWER-RPT3 | #SRPT3 | SEWE07 |
| 66. | SEWER-RPT4 | #SRPT4 | SEWE08 |
| 67. | SEWER-RPT5 | #SRPT5 | SEWE09 |
| 68. | SEWER-RPT6 | #SRPT6 | VIDEO & RPT601 |

* Same program for Water Department and Sanitary Sewer Department.

SANITARY SEWER DEPARTMENT: UTILITY PROGRAMS

| NO. | SOURCE PROGRAM | RUN PROGRAM | PRINT FILE |
|---|---|---|---|
| 69. | WATER-DATA | #DATAINPUT | VIDEO |
| 70. | CORRECT-WORKS | #CORRECTS | VIDEO |
| 71. | SW-CHANGETABLES | #SCHANGETABLES | VIDEO & SW-C01 |
| 72. | CREATE-CMFS | #CRCMFS | VIDEO |
| 73. | SW-BUILDTABLES | #SBUILDTABLES | VIDEO |
| 74. | PRINT-CMFS | #PRNT-CMFS | VIDEO |
| 75. | SW-ACTVTABLE | NOTE 3 | - |
| 76. | SW-ACCTTABLE | NOTE 3 | - |
| 77. | SW-COSTTABLE | NOTE 3 | - |

NOTE 3: These tables are part of the source code for SW-BUILDTABLES.

## 3. LIST OF DATA FILES

| DESCRIPTION | WATER DEPARTMENT | SANITARY SEWER DEPARTMENT |
|---|---|---|
| EXPENSE DATA | EXPNW | EXPNS |
| BUDGET DATA | BUDGW | BUDGS |
| REJECTED DATA | NONWA | NONSW |
| INPUT WORK FILE | WORKW | WORKS |
| SORTED WORK FILE | WORKS | WORKS2 |
| COST MATRIX FILE | COSTW | COSTS |
| ACTIVITY FILE | WA-ACTV | SW-ACTV |
| OBJECT FILE | WA-OBJT | SW-OBJT |
| COST CENTER FILE | WA-CCTR | SW-CCTR |
| EXPENSE FILE | WA-EXP | none |
| FLOW DATA FILE | WATERDFL | SEWERDFL |
| RPT-1 BACKGROUND DATA | SHIFTL1 | SHIFTL1 |
| RPT-1 DATA | WATERL1 | SEWERL1 |
| RPT-3 PREVIOUS YEARS | PREVW | PREVS |
| DUMMY REPORT FILE | SAVWATEO | SAVSEWEO |

4. OPERATING TIMES (minutes)

| TASK/PROGRAM | Time (min.) | Comments |
|---|---|---|
| RUN_MAGENT | 9 | Mount & read expense tape |
| RUN_MAGNET2 | 5 | Mount & read budget tape |
| SEG #DATAINPUT | 2 | Enter flow data |
| SEG #CORRECTW/S | varies | 30 seconds or less per correction |
| SEG #WCORRECTABLES | varies | 30 seconds or less per correction |

| TASK/PROGRAM | Water Department Time (approximate) | Cumulative | Sanitary Sewer Department Time (approximate) | Cumulative |
|---|---|---|---|---|
| RUN_FIRSTEDIT | | | | |
| #WREJECTS | 3 | 3 | 3 | 3 |
| #WMERGE | 5 | 8 | 10 | 13 |
| #WEDIT | 3 | 11 | 9 | 22 |
| PRINT_FIRSTEDIT | 7 | 18 | 7 | 29 |
| MANUAL EDITS | 5 | 23 | 5 | 34 |
| RUN_NEXTEDIT | 3 | 26 | 9 | 43 |
| PRINT_NEXTEDIT | 1 | 27 | 1 | 44 |
| RUN_REPORTS | | | | |
| #WPRCNT | 2 | 29 | – | – |
| #ALLOC1 | 1 | 30 | – | – |
| #WUPDT | 2 | 35 | 2 | 49 |
| #WRPT1 | 1 | 36 | 1 | 50 |
| #WRPT2 | 3 | 39 | 4 | 54 |
| #WRPT3 | 4 | 43 | 5 | 59 |
| #WRPT4 | 7 | 50 | 14 | 73 |
| PRINT_REPORTS | 15 | 65 | 25 | 98 |

NOTE: Operating times will vary with the amount of input data each month and number of Prime system users during execution. Print times were estimated using 180 characters per second.

# APPENDIX A

## SAMPLE OF WATER DEPARTMENT MARS REPORTS

JAN 31, 1992

REJECTED RECORDS REPORT
FOR
THE CITY OF TAMPA



| | TOTAL RECORDS | NUMBER EXPENSE RECORDS | BUDGET RECORDS | TOTAL EXPENSE AMOUNT | TOTAL BUDGET AMOUNT |
|---|---|---|---|---|---|
| DATA ON TAPES | 34712 | 33393 | 1319 | 4,514,847.07 | 42,736,569.30 |
| WATER DEPARTMENT | 6842 | 6309 | 533 | 1,373,000.42 | 14,543,187.51 |
| SEWER DEPARTMENT | 18547 | 17908 | 639 | 2,042,528.98 | 19,263,291.84 |
| REJECTED RECORDS | 9323 | 9176 | 147 | 1,099,317.67 | 8,930,089.95 |
| AFTER SUMMING | 2049 | 1902 | 147 | 1,099,317.67 | 8,930,089.95 |
| EXPECTED INPUT DATA | 34712 | 33393 | 1319 | 4,514,847.07 | 42,736,569.30 |

JAN 31, 1982

REJECTED RECORDS REPORT
FOR
THE CITY OF TAMPA



| ACTIVITY CODE | OBJECT CODE | JOB NUMBER | COST CODE | RECORD TYPE | CURRENT COST | PREVIOUS MONTH | CURRENT COST YEAR TO DATE | BUDGET AMOUNT |
|---|---|---|---|---|---|---|---|---|
| 533025 | 7304 | | | B | | | | 597,794.00 |
| 533025 | 7304 | 2581 | 3 | E | 48,918.77 | | | |
| 533025 | 9103 | | | B | | | | 2,364,969.00 |
| 533030 | 6401 | | | B | | | | 66,889.07 |
| 533030 | 6401 | 0005 | 0 | E | 903.00 | | | |
| 533032 | 6400 | | | B | | | | 211,400.00 |
| 533032 | 6401 | | | B | | | | 16,658.83 |
| 533032 | 6401 | 0004 | 9 | E | 675.00 | | | |
| 533032 | 6700 | | | B | | | | |
| 533034 | 6401 | | | B | | | | 47,098.73 |
| 533034 | 6700 | | | B | | | | 18,169.93 |
| 533036 | 6401 | | | B | | | | 750.00 |
| 533036 | 6700 | | | B | | | | 16,083.24 |
| 533041 | 1201 | | | B | | | | 194,713.00 |
| 533041 | 1201 | 8370 | 0 | E | 7,198.91 | | | |
| 533041 | 1201 | 8370 | 7 | E | 114.00 | | | |
| 533041 | 1201 | 8371 | 0 | E | 847.68 | | | |
| 533041 | 1201 | 8372 | 0 | E | 1,265.48 | | | |
| 533041 | 1201 | 8373 | 0 | E | 158.20 | | | |
| 533041 | 1201 | 8472 | 0 | E | 357.33 | | | |
| 533041 | 1201 | 8472 | 7 | E | 42.72 | | | |
| 533041 | 1201 | 8534 | 0 | E | 52.09 | | | |
| 533041 | 1201 | 8535 | 0 | E | 504.43 | | | |
| 533041 | 1201 | 8535 | 2 | E | 74.80 | | | |
| 533041 | 1201 | 8561 | 0 | E | 104.33 | | | |
| 533041 | 1201 | 8570 | 0 | E | 2.87 | | | |
| 533041 | 1201 | 8571 | 0 | E | 439.86 | | | |
| 533041 | 1201 | 8572 | 0 | E | 594.48 | | | |
| 533041 | 1201 | 8574 | 0 | E | 51.28 | | | |
| 533041 | 1201 | 8575 | 0 | E | 43.19 | | | |
| 533041 | 1201 | 8587 | 0 | E | 60.16 | | | |
| 533041 | 1201 | 8588 | 0 | E | 47.60 | | | |
| 533041 | 1201 | 8600 | 0 | E | 97.87 | | | |
| 533041 | 1201 | 8607 | 0 | E | 35.88 | | | |
| 533041 | 1201 | 8613 | 0 | E | 467.15 | | | |
| 533041 | 1201 | 8624 | 0 | E | 50.24 | | | |
| 533041 | 1201 | 8627 | 0 | E | 17.49 | | | |
| 533041 | 1201 | 8628 | 0 | E | 61.49 | | | |
| 533041 | 1201 | 8631 | 0 | E | 76.31 | | | |
| 533041 | 1201 | 8632 | 0 | E | 24.41 | | | |
| 533041 | 1201 | 8657 | 0 | E | 5.55 | | | |
| 533041 | 1201 | 8665 | 0 | E | 5.59 | | | |
| 533041 | 1201 | 8668 | 0 | E | 5.54 | | | |
| 533041 | 2200 | | | B | | | | 30,196.00 |
| 533041 | 2200 | 8370 | 0 | E | 1,007.74 | | | |
| 533041 | 2200 | 8370 | 7 | E | 15.96 | | | |
| 533041 | 2200 | 8371 | 0 | E | 118.67 | | | |
| 533041 | 2200 | 8372 | 0 | E | 177.17 | | | |

JAN 31, 1982

MERGE DATA REPORT
FOR
TAMPA WATER DEPARTMENT



| | TOTAL RECORDS | NUMBER EXPENSE RECORDS | BUDGET RECORDS | TOTAL EXPENSE AMOUNT | TOTAL BUDGET AMOUNT |
|---|---|---|---|---|---|
| DATA ON TAPES | 34712 | 33393 | 1319 | 4,514,847.07 | 42,736,569.30 |
| NON EXPENSE CODES | 27870 | 27084 | 786 | 3,141,846.65 | 28,193,381.79 |
| ACCEPTED AS INPUT | 6842 | 6309 | 533 | 1,373,000.42 | 14,543,187.51 |
| AFTER SUMMING | 1660 | 1127 | 533 | 1,373,000.42 | 14,543,187.51 |
| EXPECTED INPUT DATA | 34712 | 33393 | 1319 | 4,514,847.07 | 42,736,569.30 |

JAN 31, 1982

WATER DEPARTMENT EDIT
COST ANALYSIS SYSTEM
FOR
TAMPA, FLORIDA



| RECORD NUMBER | ACTIVITY CODE | OBJECT CODE | COST CENTER | EXPENSE CODE | RECORD TYPE | CURRENT COST | PREVIOUS MONTH | CURRENT COST YEAR TO DATE | BUDGET AMOUNT |
|---|---|---|---|---|---|---|---|---|---|
| 00066 | 533002 | 1201 | 0227 | 0 NN | E | -115.68 | | | |
| 00070 | 533002 | 1201 | 8666 ** | 0 NN | E | 17.88 | | | |
| 00080 | 533002 | 2200 | 0227 | 0 NN | E | -16.19 | | | |
| 00083 | 533002 | 2200 | 8666 ** | 0 NN | E | 2.51 | | | |
| 00092 | 533002 | 2300 | 8666 ** | 0 NN | E | .18 | | | |
| 00102 | 533002 | 2302 | 8666 ** | 0 NN | E | 1.04 | | | |
| 00110 | 533002 | 2500 | 0227 | 0 NN | E | -4.50 | | | |
| 00112 | 533002 | 2500 | 8666 ** | 0 NN | E | .65 | | | |
| 00132 | 533002 | 4502 | 0227 | 0 NN | E | -2.78 | | | |
| 00134 | 533002 | 4502 | 8666 ** | 0 NN | E | .43 | | | |
| 00157 | 533002 | 3204 | 0221 | 0 NN | E | .59 | | | |
| 00358 | 533006 | 1201 | 0621 | 0 NN | E | 57.28 | | | |
| 00363 | 533006 | 1201 | 0627 | 0 NN | E | 42.56 | | | |
| 00389 | 533006 | 2200 | 0621 | 0 NN | E | 8.02 | | | |
| 00394 | 533006 | 2200 | 0627 | 0 NN | E | 5.98 | | | |
| 00417 | 533006 | 2300 | 0621 | 0 NN | E | .66 | | | |

JAN 31, 1982

WATER DEPARTMENT EDIT
COST ANALYSIS SYSTEM
FOR
TAMPA, FLORIDA



| RECORD NUMBER | ACTIVITY CODE | OBJECT CODE | COST CENTER | EXPENSE CODE | RECORD TYPE | CURRENT COST | PREVIOUS MONTH | CURRENT COST YEAR TO DATE | BUDGET AMOUNT |
|---|---|---|---|---|---|---|---|---|---|

***** NO ERRORS *****



TOTAL INPUT DATA

| TOTAL RECORDS | NUMBER EXPENSE RECORDS | NUMBER BUDGET RECORDS | TOTAL EXPENSE AMOUNT | TOTAL BUDGET AMOUNT |
|---|---|---|---|---|
| 1650 | 1117 | 533 | 1,372,911.68 | 14,543,187.51 |

MONTH ENDING: JAN 31, 1982

SUMMARY OF SYSTEMS INFORMATION
FOR
TAMPA WATER DEPARTMENT
(LEVEL I)



| CATEGORY | ACQUISITION | PURIFICATION | DELIVERY | SUPPORT | DEBT EXPENSE | DEPRECIATION | TOTAL |
|---|---|---|---|---|---|---|---|
| UNIT COST $/MG | | | | | | | |
| CURRENT MONTH | $ 9.21 | $ 124.97 | $ 228.16 | $ 202.85 | $ 158.67 | $ 101.74 | $ 825.60 |
| PREVIOUS MONTH | 7.28 | 159.23 | 175.07 | 70.62 | 157.95 | 96.06 | 666.21 |
| CURRENT MONTH PREVIOUS YEAR | | | | | | | |
| CURRENT YEAR (YTD) | 8.96 | 143.64 | 220.46 | 96.69 | 164.09 | 96.53 | 730.37 |
| PREVIOUS YEAR (YTD) | | | | | | | |
| TOTAL COST | | | | | | | |
| CURRENT MONTH | $ 15,312.49 | $ 207,818.07 | $ 379,415.35 | $ 337,328.68 | $ 263,860.15 | $ 169,176.94 | $ 1372,911.68 |
| YEAR TO DATE | 60,430.23 | 968,306.22 | 1486,111.17 | 651,785.56 | 1106,106.74 | 650,725.91 | 4923,465.83 |
| PERCENTAGE OF TOTAL | | | | | | | |
| CURRENT YEAR (YTD) | 1.23% | 19.67% | 30.18% | 13.24% | 22.47% | 13.22% | 100.00% |
| PREVIOUS YEAR (YTD) | | | | | | | |

**********

TREATED WATER (MG)

CURRENT MONTH 1687.431

YEAR TO DATE 7540.196

PREVIOUS Y-T-D 7261.631

**********

REVENUE PRODUCING WATER (MG)

CURRENT MONTH 1662.910

YEAR TO DATE 6740.982

PREVIOUS Y-T-D 6894.851

**********

UNACCOUNTED FOR WATER (MG)

CURRENT MONTH 24.521

YEAR TO DATE 799.214

**********

BUDGET REMAINING (%)

YEAR TO DATE 66.10

**********

REPORT DATE: JAN 31, 1982

COST COMPARISON REPORT
FOR
TAMPA WATER DEPARTMENT
( LEVEL II )



COMPARISON OF ACTUAL COST TO BUDGET

| BUDGET CATEGORIES | | ACTUAL COSTS | | BUDGETED COSTS | | BUDGET REMAINING | |
|---|---|---|---|---|---|---|---|
| ACCT # ACCOUNT NAME | | CURR PERIOD | YEAR TO DATE | YR TO DATE | ANNUAL AMT | AMOUNT | PERCENT |
| OFFICE OF DIRECTOR (26) | | | | | | | |
| 1100 EXECUTIVE SALARIES | | | | 10,920.00 | 32,760.00 | 32,760.00 | |
| 1201 REGULAR SALARIES | | 8,704.63 | 32,233.40 | 19,629.64 | 58,889.00 | 26,655.60 | 45.3 |
| 1203 SERVICE AWARDS | | | | 236.00 | 708.00 | 708.00 | |
| 1400 OVERTIME PAY | | | | 333.32 | 1,000.00 | 1,000.00 | |
| 2200 PENSION | CONTRIBUTIONS | 1,265.83 | 4,559.41 | 4,730.32 | 14,191.00 | 9,631.59 | 67.9 |
| 2300 LIFE INSURANCE | | 49.44 | 228.42 | 212.64 | 638.00 | 409.58 | 64.2 |
| 2301 AD & D INSURANCE | | | | 30.32 | 91.00 | 91.00 | |
| 2302 HEALTH INSURANCE | | 573.63 | 1,509.02 | 1,261.32 | 3,784.00 | 2,274.98 | 60.1 |
| 2400 WORKMENS COMP | | | | 707.32 | 2,122.00 | 2,122.00 | |
| 2500 UNEMPLOYMENT | COMPENSATION | 149.84 | 149.84 | 37.00 | 111.00 | -38.84 | -34.9** |
| 3101 PROFESSIONAL SVCS | | 9,599.00 | 40,749.00 | 13,666.64 | 41,000.00 | 251.00 | .6 |
| 3401 CONTRACTURAL SVCS | | 80.97 | 284.46 | 485.96 | 1,457.92 | 1,173.46 | 80.5 |
| 4000 TRAVEL | | 778.90 | 2,890.81 | 4,038.84 | 12,116.56 | 9,225.75 | 76.1 |
| 4001 MOTOR POOL | | | | 1,822.00 | 5,466.00 | 5,466.00 | |
| 4100 TELEPHONE | | 169.11 | 460.85 | 780.00 | 2,340.00 | 1,879.15 | 80.3 |
| 4202 MAILROOM | | 66.86 | 268.58 | | | -268.58 | |
| 4203 POSTAGE | | 10.65 | 50.65 | 100.00 | 300.00 | 249.35 | 83.1 |
| 4400 RENT | | | | 333.32 | 1,000.00 | 1,000.00 | |
| 4502 INSURANCE | INTERDEPARTMENTAL | 136.52 | 136.52 | 738.64 | 2,216.00 | 2,079.48 | 93.8 |
| 4600 REPAIR | CONTRACTORS | | | 33.32 | 100.00 | 100.00 | |
| 4700 PUBLICATIONS DEPT | | 146.42 | 191.05 | 174.08 | 522.28 | 331.23 | 63.4 |
| 4800 EMPLOYEE | AWARDS AND FOOD | 372.23 | 429.23 | 805.00 | 2,415.00 | 1,985.77 | 82.2 |
| 4905 DUES AND | SUBSCRIPTIONS | 269.90 | 4,414.90 | 1,741.64 | 5,225.00 | 810.10 | 15.5 |
| 5100 OFFICE SUPPLIES | OUTSIDE | 106.00 | 304.36 | 140.00 | 420.00 | 115.64 | 27.5 |
| 5102 OFFICE SUPPLIES | CENTRAL SUPPLY | | | 66.64 | 200.00 | 200.00 | |
| 5204 MATERIALS | | | | 25.00 | 75.00 | 75.00 | |
| 5205 TOOLS AND | MINOR EQUIPMENT | | 154.48 | 66.64 | 200.00 | 45.52 | 22.8 |
| 9301 DEPRECIATION | | 170.82 | 170.82 | | | -170.82 | |
| ACTIVITY SUBTOTAL | | 22,650.75 | 89,185.80 | 63,115.92 | 189,347.76 | 100,161.96 | 52.9 |
| TOTAL ALL ACTIVITIES | | 1,372,911.68 | 4,923,465.83 | 4,847,729.16 | 14,543,187.51 | 9,619,721.68 | 66.1 |
| TOTAL INPUT DATA | | 1,372,911.68 | 4,923,465.83 | 4,847,729.16 | 14,543,187.51 | | |
| NUMBER OF ACCOUNTS SORTED | | | | 4,322.00 | | 515.00 | |

REPORT DATE: JAN 31, 1982

COST COMPARISON REPORT
FOR
TAMPA WATER DEPARTMENT
( LEVEL III )



COMPARISON OF ACTUAL COST TO PRIOR YEAR 1981

| COST CATEGORIES | ACTUAL COSTS CURRENT YEAR (YTD) | ACTUAL COSTS PREVIOUS YEAR (YTD) | COMPARISON REMAINDER | COMPARISON PERCENT |
|---|---|---|---|---|
| EXPENSE TYPE: 1. OPERATING SUPERVISION | | | | |
| ACQUISITION | | | | |
| EXECUTIVE SALARIES | | | | |
| REGULAR SALARIES | 9,705.04 | | | |
| CETA | | | | |
| OTHER LABOR | | | | |
| BENEFITS - EXECUTIVE & REGULAR | 1,976.12 | | | |
| BENEFITS - CETA | | | | |
| OTHER DIRECT COSTS | | | | |
| GENERAL | 42.53 | | | |
| REPAIR & MAINTENANCE | | | | |
| CHEMICALS | | | | |
| POWER | | | | |
| TOTAL COST OF ACQUISITION | 11,723.69 | | | |
| PURIFICATION | | | | |
| EXECUTIVE SALARIES | | | | |
| REGULAR SALARIES | 17,371.31 | | | |
| CETA | | | | |
| OTHER LABOR | | | | |
| BENEFITS - EXECUTIVE & REGULAR | 3,580.56 | | | |
| BENEFITS - CETA | | | | |
| OTHER DIRECT COSTS | | | | |
| GENERAL | 89.39 | | | |
| REPAIR & MAINTENANCE | | | | |
| CHEMICALS | | | | |
| POWER | | | | |
| TOTAL COST OF PURIFICATION | 21,041.25 | | | |

DATE: JAN 31, 1982

LEVEL IV REPORT OF
ACQUISITION COSTS FOR
TAMPA, FLORIDA



| COST CATEGORY DESCRIPTIONS | SULPHUR SPRINGS INTAKE @ PUMPING | SULPHUR SPRINGS TRANSMISSION | HILLSBOROUGH RIVER DAM | HILLSBOROUGH RIVER DAM GROUNDS |
|---|---|---|---|---|
| OPERATING GENERAL (3) | | | | |
| 1201 REGULAR SALARIES | 18.29 | 18.31 | 18.30 | 18.31 |
| (YTD) | 261.60 | 261.65 | 261.64 | 261.66 |
| 2200 PENSION CONTRIBUTIONS | 4.03 | 4.04 | 4.04 | 4.04 |
| (YTD) | 38.04 | 38.10 | 38.08 | 38.10 |
| 2300 LIFE INSURANCE | .21 | .23 | .23 | .22 |
| (YTD) | 1.33 | 1.41 | 1.40 | 1.37 |
| 2302 HEALTH INSURANCE | 1.39 | 1.41 | 1.41 | 1.41 |
| (YTD) | 15.26 | 15.33 | 15.35 | 15.34 |
| 2500 UNEMPLOYMENT COMPENSATION | .47 | .48 | .48 | .48 |
| (YTD) | .47 | .48 | .48 | .48 |
| 4001 MOTOR POOL | 6.78 | | | |
| (YTD) | 16.22 | 7.37 | 7.37 | 7.39 |
| 4100 TELEPHONE | 73.70 | | | |
| (YTD) | 247.05 | 29.55 | 29.55 | 29.56 |
| 4301 UTILITIES - OTHER | 6,945.18 | | | |
| (YTD) | 8,545.48 | 46.25 | 46.25 | 46.25 |
| 4502 INSURANCE INTERDEPARTMENTAL | .22 | .22 | .23 | .22 |
| (YTD) | .22 | .22 | .23 | .22 |
| 5202 UNIFORMS | 2.41 | | | |
| (YTD) | 3.13 | .09 | .09 | .09 |
| 5204 MATERIALS | .14 | | | |
| (YTD) | 3.97 | 3.00 | 8.72 | 8.74 |
| 3 CURRENT EXP TOTAL | 7,052.82 | 24.69 | 24.69 | 24.68 |
| 3 YTD EXPENSE TOTAL | 9,276.22 | 546.35 | 580.11 | 580.18 |

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DATE
Friday, June 11, 1982 9:57 AM
OK, SEG #WRPT6
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.

LEVEL VI VIDEO DISPLAY


WHICH COST CENTER DO YOU WANT!
 (TYPE 2 DIGITS OR RETURN TO EXIT PROGRAM)
21
NR.  COST CENTER
21   HILLSBOROUGH RIVER  PLANT TREATMENT

WHICH EXPENSE TYPE! (1 DIGIT)
2
NR.  EXPENSE NAME
2   OPERATING ENGINEERING

DO YOU WANT TO SUM ALL ACCOUNTS! YES OR NO
YES


LEVEL VI VIDEO DISPLAY

COST CENTER 21  HILLSBOROUGH RIVER  PLANT TREATMENT

EXPENSE CODE   2  OPERATING ENGINEERING

ACT  ACCT  ACCOUNT NAME          CURRENT MO.  PREVIOUS MO.  YEAR TO DATE
***  ****  ********************  ***********  ************  ************
 21  1201  REGULAR SALARIES            .00          .00          .82
 21  2200  PENSION                     .00          .00          .12
 21  2302  HEALTH INSURANCE            .00          .00          .02
***  ****  ********************  ***********  ************  ************
           TOTALS ALL ACCOUNTS         .00          .00          .96


LEVEL VI VIDEO DISPLAY


WHICH COST CENTER DO YOU WANT!
 (TYPE 2 DIGITS OR RETURN TO EXIT PROGRAM)

OK, DATE
Friday, June 11, 1982 9:59 AM
OK,
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DATE
Friday, June 11, 1982 9:59 AM
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DATA DATE: JAN 31, 1982

VIDEO REQUEST REPORT
FOR
TAMPA WATER DEPARTMENT
( LEVEL VI )

PAGE: 1

**** COST CENTER 21 HILLSBOROUGH RIVER PLANT TREATMENT

**** EXPENSE CODE 2 OPERATING ENGINEERING

| ACTV | ACCT | ACCOUNT NAME | CURRENT MO. | PREVIOUS MO. | YEAR TO DATE |
|---|---|---|---|---|---|
| **** | **** | ********** | ********** | ********** | ********** |
| 21 | 1201 | REGULAR SALARIES | | | .82 |
| 21 | 2200 | PENSION CONTRIBUTIONS | | | .12 |
| 21 | 2302 | HEALTH INSURANCE | | | .02 |
| **** | **** | ********** | ********** | ********** | ********** |
| | | TOTALS ALL ACCOUNTS | | | .96 |

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BOTTOM
FILE
RPT601
OK, DATE
Friday, June 11, 1982 10:00 AM
OK,
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# APPENDIX B

## SAMPLE OF SANITARY SEWER DEPARTMENT MARS REPORTS

JAN 31, 1982

REJECTED RECORDS REPORT
FOR
THE CITY OF TAMPA



| | TOTAL RECORDS | NUMBER EXPENSE RECORDS | BUDGET RECORDS | TOTAL EXPENSE AMOUNT | TOTAL BUDGET AMOUNT |
|---|---|---|---|---|---|
| DATA ON TAPES | 34712 | 33393 | 1319 | 4,514,847.07 | 42,736,569.30 |
| WATER DEPARTMENT | 6842 | 6309 | 533 | 1,373,000.42 | 14,343,187.91 |
| SEWER DEPARTMENT | 18179 | 17614 | 565 | 2,018,149.95 | 19,262,610.34 |
| REJECTED RECORDS | 9691 | 9470 | 221 | 1,123,696.70 | 8,930,771.45 |
| AFTER SUMMING | 2159 | 1938 | 221 | 1,123,696.70 | 8,930,771.45 |
| EXPECTED INPUT DATA | 34712 | 33393 | 1319 | 4,514,847.07 | 42,736,569.30 |

| ACTIVITY CODE | OBJECT CODE | JOB NUMBER | COST CODE | RECORD TYPE | CURRENT COST | PREVIOUS MONTH | CURRENT COST YEAR TO DATE | BUDGET AMOUNT |
|---|---|---|---|---|---|---|---|---|
| 533111 | 1201 | 8436 | 0 | E | 309.64 | | | |
| 533111 | 1201 | 8583 | 0 | E | 937.87 | | | |
| 533111 | 1201 | 8652 | 0 | E | 450.50 | | | |
| 533111 | 2200 | 8436 | 0 | E | 43.37 | | | |
| 533111 | 2200 | 8583 | 0 | E | 120.08 | | | |
| 533111 | 2200 | 8652 | 0 | E | 63.07 | | | |
| 533111 | 2300 | 8436 | 0 | E | 4.33 | | | |
| 533111 | 2300 | 8583 | 0 | E | 10.15 | | | |
| 533111 | 2300 | 8652 | 0 | E | 4.47 | | | |
| 533111 | 2302 | 8436 | 0 | E | 14.60 | | | |
| 533111 | 2302 | 8583 | 0 | E | 35.21 | | | |
| 533111 | 2302 | 8652 | 0 | E | 31.38 | | | |
| 533111 | 2500 | 8436 | 0 | E | 14.75 | | | |
| 533111 | 2500 | 8583 | 0 | E | 40.15 | | | |
| 533111 | 2500 | 8652 | 0 | E | 15.59 | | | |
| 533111 | 4502 | 8436 | 0 | E | 7.39 | | | |
| 533111 | 4502 | 8583 | 0 | E | 19.61 | | | |
| 533111 | 4502 | 8652 | 0 | E | 9.87 | | | |
| 533111 | 4911 | 8436 | 0 | E | 35.08 | | | |
| 533111 | 6300 | 8652 | 0 | E | 515.00 | | | |
| 533118 | 1201 | 8626 | 0 | E | 28.65 | | | |
| 533118 | 2200 | 8626 | 0 | E | 4.01 | | | |
| 533118 | 2300 | 8626 | 0 | E | .20 | | | |
| 533118 | 2302 | 8626 | 0 | E | 2.69 | | | |
| 533120 | 1201 | 8420 | 0 | E | 60.15 | | | |
| 533120 | 1201 | 8592 | 0 | E | 166.03 | | | |
| 533120 | 1201 | 8610 | 0 | E | 260.72 | | | |
| 533120 | 1201 | 8654 | 0 | E | 5.55 | | | |
| 533120 | 2200 | 8420 | 0 | E | 8.42 | | | |
| 533120 | 2200 | 8592 | 0 | E | 23.25 | | | |
| 533120 | 2200 | 8610 | 0 | E | 36.50 | | | |
| 533120 | 2200 | 8654 | 0 | E | .78 | | | |
| 533120 | 2300 | 8420 | 0 | E | .75 | | | |
| 533120 | 2300 | 8592 | 0 | E | 2.07 | | | |
| 533120 | 2300 | 8610 | 0 | E | 2.14 | | | |
| 533120 | 2300 | 8654 | 0 | E | .06 | | | |
| 533120 | 2302 | 8420 | 0 | E | 9.80 | | | |
| 533120 | 2302 | 8592 | 0 | E | 18.10 | | | |
| 533120 | 2302 | 8610 | 0 | E | 27.93 | | | |
| 533120 | 2302 | 8654 | 0 | E | .10 | | | |
| 533120 | 2500 | 8420 | 0 | E | 2.97 | | | |
| 533120 | 2500 | 8592 | 0 | E | 4.36 | | | |
| 533120 | 2500 | 8610 | 0 | E | 1.91 | | | |
| 533120 | 4502 | 8420 | 0 | E | 1.44 | | | |
| 533120 | 4502 | 8592 | 0 | E | 2.03 | | | |
| 533120 | 4502 | 8610 | 0 | E | .90 | | | |
| 533120 | 4911 | 8420 | 0 | E | 12.28 | | | |
| 533120 | 4911 | 8592 | 0 | E | 27.03 | | | |

JAN 31, 1982

MERGE DATA REPORT
FOR
TAMPA SEWER DEPARTMENT



| | TOTAL RECORDS | NUMBER EXPENSE RECORDS | BUDGET RECORDS | TOTAL EXPENSE AMOUNT | TOTAL BUDGET AMOUNT |
|---|---|---|---|---|---|
| DATA ON TAPES | 34712 | 33393 | 1319 | 4,514,847.07 | 42,736,569.30 |
| NON EXPENSE CODES | 16533 | 15779 | 754 | 2,496,697.12 | 23,473,958.96 |
| ACCEPTED AS INPUT | 18179 | 17614 | 565 | 2,018,149.95 | 19,262,610.34 |
| AFTER SUMMING | 3954 | 3389 | 565 | 2,018,149.95 | 19,262,610.34 |
| EXPECTED INPUT DATA | 34712 | 33393 | 1319 | 4,514,847.07 | 42,736,569.30 |

JAN 31, 1982

SEWER DEPARTMENT EDIT
COST ANALYSIS SYSTEM
FOR
TAMPA, FLORIDA



| RECORD NUMBER | ACTIVITY CODE | OBJECT CODE | COST CENTER | COST CODE | RECORD TYPE | CURRENT COST | PREVIOUS MONTH | CURRENT COST YEAR TO DATE | BUDGET AMOUNT |
|---|---|---|---|---|---|---|---|---|---|
| 00633 | 535020 | 1201 | 1187 | 8 ** | E | 55.20 | | | |
| 00657 | 535020 | 2200 | 1187 | 8 ** | E | 7.73 | | | |
| 00679 | 535020 | 2300 | 1187 | 8 ** | E | .66 | | | |
| 00702 | 535020 | 2302 | 1187 | 8 ** | E | 8.59 | | | |
| 00725 | 535020 | 2500 | 1187 | 8 ** | E | 2.38 | | | |
| 00744 | 535020 | 4502 | 1187 | 8 ** | E | 1.33 | | | |
| 01279 | 535021 | 5204 | 3936 | 6 ** | E | 6.60 | | | |
| 01415 | 535030 | 1201 | 0000 ** | 0 | E | 305.90 | | | |
| 01456 | 535030 | 2200 | 0000 ** | 0 | E | 42.82 | | | |
| 01495 | 535030 | 2300 | 0000 ** | 0 | E | 3.29 | | | |
| 01535 | 535030 | 2302 | 0000 ** | 0 | E | 42.96 | | | |
| 01575 | 535030 | 2500 | 0000 ** | 0 | E | 1.07 | | | |
| 01618 | 535030 | 4301 | 0900 ** | 0 | E | 420.59 | | | |
| 01624 | 535030 | 4502 | 0000 ** | 0 | E | 7.34 | | | |
| 01635 | 535035 | 4100 | 0901 ** | 0 | E | 22.80 | | | |
| 02140 | 535036 | 1201 | 1002 ** | 1 | E | 228.00 | | | |

JAN 31, 1982

SEWER DEPARTMENT EDIT
COST ANALYSIS SYSTEM
FOR
TAMPA, FLORIDA



| RECORD NUMBER | ACTIVITY CODE | OBJECT CODE | COST CENTER | COST CODE | RECORD TYPE | CURRENT COST | PREVIOUS MONTH | CURRENT COST YEAR TO DATE | BUDGET AMOUNT |
|---|---|---|---|---|---|---|---|---|---|

** NO ERRORS **



TOTAL INPUT DATA

| TOTAL RECORDS | NUMBER EXPENSE RECORDS | NUMBER BUDGET RECORDS | TOTAL EXPENSE AMOUNT | TOTAL BUDGET AMOUNT |
|---|---|---|---|---|
| 3954 | 3389 | 565 | 2,018,149.95 | 19,262,610.34 |

TOTAL INPUT DATA

| TOTAL RECORDS | NUMBER EXPENSE RECORDS | NUMBER BUDGET RECORDS | TOTAL EXPENSE AMOUNT | TOTAL BUDGET AMOUNT |
|---|---|---|---|---|
| 3954 | 3389 | 565 | 2,018,149.95 | 19,262,610.34 |

MONTH ENDING: JAN 31, 1982

SUMMARY OF SYSTEMS INFORMATION
FOR
TAMPA SEWER DEPARTMENT
(LEVEL I)



| CATEGORY | COLLECTION | TREATMENT | DISPOSAL | SUPPORT | DEBT EXPENSE | DEPRECIATION | TOTAL |
|---|---|---|---|---|---|---|---|
| UNIT COST $/MG | | | | | | | |
| CURRENT MONTH | $ 165.47 | $ 435.87 | $ | $ 664.81 | $ 209.75 | $ 263.10 | $ 1,739.00 |
| PREVIOUS MONTH | 137.53 | 334.16 | | 309.29 | 198.82 | 268.07 | 1,247.87 |
| CURRENT MONTH PREVIOUS YEAR | | | | | | | |
| CURRENT YEAR (YTD) | 146.78 | 385.37 | | 411.43 | 218.92 | 281.44 | 1,443.94 |
| PREVIOUS YEAR (YTD) | | | | | | | |
| TOTAL COST | | | | | | | |
| CURRENT MONTH | $ 189,845.17 | $ 500,087.88 | $ | $ 762,750.17 | $ 240,652.56 | $ 324,814.17 | $ 2018,149.95 |
| YEAR TO DATE | 676,361.39 | 1775,805.72 | | 1895,919.02 | 1008,820.12 | 1296,884.38 | 6653,790.63 |
| PERCENTAGE OF TOTAL | | | | | | | |
| CURRENT YEAR (YTD) | 10.17% | 26.69% | % | 28.49% | 15.16% | 19.49% | 100.00% |
| PREVIOUS YEAR (YTD) | | | | | | | |

| | | | |
|---|---|---|---|
| PLANT FLOW (MG) | | BILLABLE Q (MG) | |
| CURRENT MONTH | 1632.840 | CURRENT MONTH | 1147.329 |
| YEAR TO DATE | 6099.840 | YEAR TO DATE | 4608.079 |
| PREVIOUS Y-T-D | 5934.000 | PREVIOUS Y-T-D | 4626.000 |
| UNBILLED FLOW (MG) | | BUDGET REMAINING (%) | |
| CURRENT MONTH | 485.511 | YEAR TO DATE | 65.40 |
| YEAR TO DATE | 1491.761 | | |

REPORT DATE: JAN 31, 1982

COST COMPARISON REPORT
FOR
TAMPA SEWER DEPARTMENT
( LEVEL II )



COMPARISON OF ACTUAL COST TO BUDGET

| BUDGET CATEGORIES | | | ACTUAL COSTS | | BUDGETED COSTS | | BUDGET REMAINING | |
|---|---|---|---|---|---|---|---|---|
| ACCT # | ACCOUNT NAME | | CURR PERIOD | YEAR TO DATE | YR TO DATE | ANNUAL AMT | AMOUNT | PERCENT |
| SEWER ADMIN. | OPERATIONS GENERAL (02) | | | | | | | |
| 1100 | EXECUTIVE SALARIES | | | | 10,691.32 | 32,074.00 | 32,074.00 | |
| 1201 | REGULAR SALARIES | | 108,540.29 | 401,513.68 | 139,639.32 | 418,918.00 | 17,404.32 | 4.1 |
| 1202 | TERMINAL LEAVE | | | | 2,100.00 | 6,300.00 | 6,300.00 | |
| 1203 | SERVICE AWARDS | | | | 3,346.64 | 10,040.00 | 10,040.00 | |
| 2200 | PENSION | CONTRIBUTIONS | 13,499.27 | 53,725.31 | 19,995.64 | 59,987.00 | 6,261.69 | 10.4 |
| 2300 | LIFE INSURANCE | | 769.56 | 2,725.95 | 952.64 | 2,858.00 | 132.05 | 4.6 |
| 2301 | AD & D INSURANCE | | | | 134.32 | 403.00 | 403.00 | |
| 2302 | HEALTH INSURANCE | | 8,493.74 | 25,612.55 | 8,457.00 | 25,371.00 | -241.55 | -.9** |
| 2400 | WORKMENS COMP | | | | 2,386.64 | 7,160.00 | 7,160.00 | |
| 2500 | UNEMPLOYMENT | COMPENSATION | 1,156.82 | 1,156.82 | 184.64 | 554.00 | -602.82 | -108.7** |
| 3100 | PROFESSIONAL SVCS | EMPLOYEES | | | 116.64 | 350.00 | 350.00 | |
| 3101 | PROFESSIONAL SVCS | | 9,942.00 | 34,997.50 | 38,680.04 | 116,040.19 | 81,042.69 | 69.8 |
| 3200 | AUDITING | | 2,555.00 | 2,555.00 | 6,110.00 | 18,330.00 | 15,775.00 | 86.1 |
| 3401 | CONTRACTURAL SVCS | | 1,297.50 | 1,972.29 | 1,755.40 | 5,266.20 | 3,293.91 | 62.5 |
| 4000 | TRAVEL | | 1,078.00 | 1,078.00 | 1,666.64 | 5,000.00 | 3,922.00 | 78.4 |
| 4100 | TELEPHONE | | 1,185.68 | 3,688.31 | 5,051.04 | 15,153.20 | 11,464.89 | 75.7 |
| 4201 | FREIGHT | | | 19.00 | 33.32 | 100.00 | 81.00 | 81.0 |
| 4202 | MAILROOM | | 450.97 | 2,073.31 | 1,400.00 | 4,200.00 | 2,126.69 | 50.6 |
| 4203 | POSTAGE | | 1.72 | 128.51 | 166.64 | 500.00 | 371.49 | 74.3 |
| 4304 | ENTPR - ADMIN UTIL | | 1,451.47 | 4,693.80 | | | -4,693.80 | |
| 4400 | RENT | | | | 166.64 | 500.00 | 500.00 | |
| 4403 | LEASE/PUR CAP EQUIP | | 249.01 | 1,204.95 | 2,083.88 | 6,251.75 | 5,046.80 | 80.7 |
| 4502 | INSURANCE | INTERDEPARTMENTAL | 1,000.16 | 1,000.16 | 3,688.64 | 11,066.00 | 10,065.84 | 91.0 |
| 4600 | REPAIR | CONTRACTORS | | 344.50 | 1,063.24 | 3,189.75 | 2,845.25 | 89.2 |
| 4700 | PUBLICATIONS DEPT | | 222.67 | 912.12 | 2,353.84 | 7,061.60 | 6,149.48 | 87.1 |
| 4800 | EMPLOYEE | AWARDS AND FOOD | | | 33.32 | 100.00 | 100.00 | |
| 4900 | ADVERTISING | | 468.24 | 3,682.94 | 2,247.32 | 6,742.00 | 3,059.06 | 45.4 |
| 4902 | BAD DEBTS | | 21,303.53 | 57,475.67 | 15,000.00 | 45,000.00 | -12,475.67 | -27.6** |
| 4903 | LICENSE REFUND | | 1,740.80 | 2,284.80 | 2,000.00 | 6,000.00 | 3,715.20 | 61.9 |
| 4905 | DUES AND | SUBSCRIPTIONS | 133.00 | 183.00 | 1,100.00 | 3,300.00 | 3,117.00 | 94.4 |
| 4906 | LICENSES | | 4.49 | 116.42 | 948.32 | 2,845.00 | 2,728.58 | 95.9 |
| 4911 | EQUIPMENT ALLOCATION | | 1,371.68 | 5,631.97 | | | -5,631.97 | |
| 4914 | INTERDEPARTMENTAL | | 64,969.00 | 65,851.06 | 66,305.64 | 198,917.00 | 133,065.94 | 66.9 |
| 4919 | SAFETY SERV INT CHGS | | 3,665.68 | 3,665.68 | 3,665.64 | 10,997.00 | 7,331.32 | 66.7 |
| 4920 | UTILITY BILL CHGS | | 190,857.68 | 190,857.68 | 190,857.64 | 572,573.00 | 381,715.32 | 66.7 |
| 4923 | WATER REBR CODR CHGS | | 5,558.68 | 5,558.68 | 6,948.32 | 20,845.00 | 15,286.32 | 73.3 |
| 4925 | UTILITY MAIL OPENING | | 10,084.68 | 10,084.68 | 10,084.64 | 30,254.00 | 20,169.32 | 66.7 |
| 4926 | CENTRAL CASHIER CHGS | | 4,332.00 | 4,332.00 | 4,332.00 | 12,996.00 | 8,664.00 | 66.7 |
| 4932 | OTH CUR CHG - G F S | | | | 156,317.64 | 468,953.00 | 468,953.00 | |
| 5100 | OFFICE SUPPLIES | OUTSIDE | 124.32 | 1,027.58 | 1,853.92 | 5,560.57 | 4,532.99 | 81.5 |
| 5102 | OFFICE SUPPLIES | CENTRAL SUPPLY | 87.58 | 578.35 | 1,432.04 | 4,296.21 | 3,717.86 | 86.5 |
| 5203 | OTHER SUPPLIES | OUTSIDE | | | 83.32 | 250.00 | 250.00 | |
| 5204 | MATERIALS | | | 219.78 | 133.32 | 400.00 | 180.22 | 45.1 |

REPORT DATE: JAN 31, 1982

COST COMPARISON REPORT
FOR
TAMPA SEWER DEPARTMENT
( LEVEL III )



COMPARISON OF ACTUAL COST TO PRIOR YEAR 1981

| COST CATEGORIES | ACTUAL COSTS CURRENT YEAR (YTD) | ACTUAL COSTS PREVIOUS YEAR (YTD) | COMPARISON REMAINDER | COMPARISON PERCENT |
|---|---|---|---|---|
| **TREATMENT** | | | | |
| EXECUTIVE SALARIES | | | | |
| REGULAR SALARIES | 361,160.23 | | | |
| CETA | | | | |
| OTHER LABOR | | | | |
| BENEFITS - EXECUTIVE & REGULAR | 78,653.00 | | | |
| BENEFITS - CETA | | | | |
| OTHER DIRECT COSTS | | | | |
| GENERAL | 162,527.52 | | | |
| REPAIR & MAINTENANCE | 64,294.96 | | | |
| CHEMICALS | 290,547.75 | | | |
| POWER | 818,622.26 | | | |
| TOTAL COST OF TREATMENT | 1,775,805.72 | | | |
| **COLLECTION** | | | | |
| EXECUTIVE SALARIES | | | | |
| REGULAR SALARIES | 251,143.80 | | | |
| CETA | | | | |
| OTHER LABOR | | | | |
| BENEFITS - EXECUTIVE & REGULAR | 62,816.60 | | | |
| BENEFITS - CETA | | | | |
| OTHER DIRECT COSTS | | | | |
| GENERAL | 134,408.89 | | | |
| REPAIR & MAINTENANCE | 12,387.89 | | | |
| CHEMICALS | 18,778.24 | | | |
| POWER | 196,825.97 | | | |
| TOTAL COST OF COLLECTION | 676,361.39 | | | |

DATE: JAN 31, 1982

LEVEL IV REPORT OF
TREATMENT COSTS FOR
TAMPA, FLORIDA



| COST CATEGORY DESCRIPTIONS | PLANT PUMP STATION OPERATING - PLANT | PLANT PUMP STATION ELECTRICAL | PLANT PUMP STATION MECHANICAL | PLANT PUMP STATION BLDGS/GRDS |
|---|---|---|---|---|
| 1201 REGULAR SALARIES | 832.25 | 207.47 | 459.84 | |
| (YTD) | 3,172.94 | 1,456.71 | 1,379.12 | 227.51 |
| 2200 PENSION CONTRIBUTIONS | 116.58 | 29.05 | 64.34 | |
| (YTD) | 444.31 | 203.94 | 193.00 | 31.85 |
| 2300 LIFE INSURANCE | 6.37 | 2.48 | 5.05 | |
| (YTD) | 15.70 | 10.40 | 12.14 | 1.22 |
| 2302 HEALTH INSURANCE | 53.30 | 15.88 | 46.15 | |
| (YTD) | 139.98 | 61.45 | 111.54 | 7.21 |
| 2500 UNEMPLOYMENT COMPENSATION | 20.68 | 7.20 | 14.83 | |
| (YTD) | 20.68 | 7.20 | 14.83 | |
| 2502 INSURANCE INTERDEPARTMENTAL | 13.48 | 4.09 | 8.05 | |
| (YTD) | 13.48 | 4.09 | 8.05 | |
| 4911 EQUIPMENT ALLOCATION | | 10.23 | 45.93 | |
| (YTD) | 53.82 | 55.80 | 155.34 | |
| 5204 MATERIALS | | | 37.12 | |
| (YTD) | | 48.36 | 23,422.95 | 5.10 |
| CURRENT COST CENTER TOTAL | 1,042.66 | 276.40 | 681.31 | |
| YTD COST CENTER TOTAL | 3,860.91 | 1,847.95 | 25,333.50 | 272.89 |

DATE: JAN 31, 1982

LEVEL V REPORT OF
TREATMENT COSTS FOR
TAMPA, FLORIDA



| COST CATEGORY DESCRIPTIONS | 001 PLANT PUMP STATION | 002 JUNCTION CHAMBER 1 | 003 METER VAULT 1 | 004 SCREEN & GRIT 1 |
|---|---|---|---|---|
| 1201 REGULAR SALARIES | 1,499.56 | 1,498.00 | 57.28 | 106.16 |
| (YTD) | 6,293.80 | 4,270.95 | 57.28 | 899.16 |
| 2200 PENSION CONTRIBUTIONS | 209.97 | 209.79 | 8.02 | 14.88 |
| (YTD) | 881.16 | 598.05 | 8.02 | 125.96 |
| 2300 LIFE INSURANCE | 13.90 | 12.44 | 1.00 | .94 |
| (YTD) | 39.96 | 27.12 | 1.00 | 5.37 |
| 2302 HEALTH INSURANCE | 115.33 | 117.45 | 8.60 | 5.63 |
| (YTD) | 324.48 | 241.46 | 8.60 | 40.53 |
| 2500 UNEMPLOYMENT COMPENSATION | 42.71 | 36.43 | 2.62 | 1.53 |
| (YTD) | 42.71 | 36.43 | 2.62 | 1.53 |
| 4502 INSURANCE INTERDEPARTMENTAL | 25.62 | 20.84 | 1.39 | .96 |
| (YTD) | 25.62 | 20.84 | 1.39 | .96 |
| 4600 REPAIR CONTRACTORS | | 2,974.30 | | |
| (YTD) | | 3,226.30 | | 1,619.60 |
| 4911 EQUIPMENT ALLOCATION | 56.16 | 106.26 | | |
| (YTD) | 271.60 | 163.02 | 3.72 | 63.24 |
| 5200 FUEL AND LUBRICANTS | | 63.25 | | |
| (YTD) | | 63.25 | | |
| 5202 UNIFORMS | | 9.90 | | |
| (YTD) | | 9.90 | | |
| 5204 MATERIALS | 37.12 | 38.68 | | |
| (YTD) | 23,476.41 | 1,354.25 | | 80.43 |
| CURRENT COST CENTER TOTAL | 2,000.37 | 5,107.34 | 78.91 | 130.10 |
| YTD COST CENTER TOTAL | 31,472.27 | 10,099.07 | 82.63 | 2,836.78 |

```
OK,

DATE
Monday, June 14, 1982 5:33 PM
OK, SEG #SRPT6
ENTER FILE ASSIGNMENTS:
> /
FILE ASSIGNMENTS COMPLETE.

LEVEL VI VIDEO DISPLAY


WHICH COST CENTER DO YOU WANT!
 (TYPE 3 DIGITS OR RETURN TO EXIT PROGRAM)
001
NR.  COST CENTER
001   PLANT PUMP STATION

DO YOU WANT A 5 DIGIT COST CENTER!  YES OR NO
YES

ENTER LAST 2 DIGITS OF COST CENTER
00
CC4  CC5
 0    0

DO YOU WANT TO SUM ALL ACCOUNTS! YES OR NO
YES


LEVEL VI VIDEO DISPLAY

COST CENTER 00100  PLANT PUMP STATION

CC  AC  ACCT  ACCOUNT NAME          CURRENT MO.  PREVIOUS MO.  YEAR TO DATE
**  **  ****  ********************  ***********  ************  ************
00  30  1201  REGULAR SALARIES         862.74       832.25       4035.68
00  30  2200  PENSION                  120.81       116.58        565.12
00  30  2300  LIFE INSURANCE             7.77         6.37         23.47
00  30  2302  HEALTH INSURANCE          92.36        53.30        232.34
00  30  2500  UNEMPLOYMENT              30.91        20.68         51.59
00  30  4502  INSURANCE                 20.69        13.48         34.17
00  30  4911  EQUIPMENT ALLOCATION      26.04          .00         79.86
**  **  ****  ********************  ***********  ************  ************
                TOTALS ALL ACCOUNTS    1161.32      1042.66       5022.23


LEVEL VI VIDEO DISPLAY


WHICH COST CENTER DO YOU WANT!
 (TYPE 3 DIGITS OR RETURN TO EXIT PROGRAM)

OK,
```

```
DATE
Monday, June 14, 1982 5:34 PM
OK, ED RPT602
EDIT
P999
.NULL.
^001^001
+
1
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DATA DATE: FEB 28, 1982

VIDEO REQUEST REPORT
FOR
TAMPA SEWER DEPARTMENT
( LEVEL VI )

PAGE: 1

***** COST CENTER 00100 PLANT PUMP STATION

| C-CTR | ACTV | ACCT | ACCOUNT NAME | | CURRENT MO. | PREVIOUS MO. | YEAR TO DATE |
|---|---|---|---|---|---|---|---|
| 00100 | 30 | 1201 | REGULAR SALARIES | | 862.74 | 832.25 | 4,035.68 |
| 00100 | 30 | 2200 | PENSION | CONTRIBUTIONS | 120.81 | 116.58 | 565.12 |
| 00100 | 30 | 2300 | LIFE INSURANCE | | 7.77 | 6.37 | 23.47 |
| 00100 | 30 | 2302 | HEALTH INSURANCE | | 92.36 | 53.30 | 232.34 |
| 00100 | 30 | 2500 | UNEMPLOYMENT | COMPENSATION | 30.91 | 20.68 | 51.59 |
| 00100 | 30 | 4502 | INSURANCE | INTERDEPARTMENTAL | 20.69 | 13.48 | 34.17 |
| 00100 | 30 | 4911 | EQUIPMENT ALLOCATION | | 26.04 | | 79.86 |
| ***** | **** | **** | TOTALS ALL ACCOUNTS | | 1,161.32 | 1,042.66 | 5,022.23 |

```
BOTTOM
FILE
RPT602
OK, DATE
Monday, June 14, 1982 5:34 PM
OK,
```

# APPENDIX C

## WATER DEPARTMENT ACTIVITY TABLES

DATE
Friday, June 11,
OK, ED WA-C01
EDIT
P500
.NULL.
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1

1982 9:34 AM

BOTTOM
FILE
WA-C01

ACTIVITY TABLE

01PRODUCTION - ADMINISTRATION

02HILLSBOROUGH RIVER-TREATMENT OPERATIONS

03HILLSBOROUGH RIVER - SLUDGE PROCESSING

04HILLSBOROUGH - PUMPING

05TECHNICAL SERVICES

06PRODUCTION MAINTENANCE

07MORRIS BRIDGE

08

09

10DISTRIBUTION - ADMINISTRATION

11DISTRIBUTION - SERVICES @ INSTALLATION

12DISTRIBUTION-CONSTRUCTION @ MAINTENANCE

13DISTRIBUTION - METERING

14DISTRIBUTION - VALUE @ HYDRANT

15DISTRIBUTION - STORES

16

17

18

19

20ENGINEERING - DESIGN @ ADMINISTRATION

21ENGINEERING - INSPECTION

22

23

24

25ADMINISTRATION DIVISION

260FFICE OF DIRECTOR

# APPENDIX D

## SANITARY SEWER DEPARTMENT ACTIVITY TABLES

```
DATE
Thursday, June 10, 1982 6:10 PM
OK, ED SW-C01
EDIT
P999
.NULL.
^001^001
1
```

ACTIVITY TABLE

02SEWER ADMIN. OPERATIONS GENERAL

05SEWER ENGINEERING SURVEY

06SEWER ENGINEERING INSPECTIONS

07

08

10SEWER ENGINEERING PLANNING

11SEWER ENGINEERING DESIGN

12SEWER ENGINEERING LEAVE CONTROL

13

14

15SEWER MAINT. YARD - ADMIN.

16SEWER MAINT SUPPLY SUPPORT

17SEWER MAINT YARD - PUBLIC SERVICES

18

20SEWER MAINT YARD PREVENTIVE MAINT

21COLLECTION SYSTEM MAINTENANCE

22

23

```
24
25TREATMENT DIVISION  ADMINISTRATION
26TREATMENT TECH SERV GENERAL
27TREATMENT TECH SERV BAY STUDY
28TREATMENT TECH SERV SEA GRANT
30TREATMENT OPERATION HOOKERS POINT
32TREATMENT PLANT     LAB SERVICES
33
34
35PUMP STATION         OPERATING
36MAINTENANCE          ELECTRICAL
37MAINTENANCE          MECHANICAL
38MAINTENANCE          BLDG - GROUNDS
39MAINTENANCE          INSTRUMENTATION
42
43MATERIAL HANDLING
44
45MAINTENANCE          EQUIPMENT CONTROL
```

# APPENDIX E

## WATER DEPARTMENT AND SANITARY SEWER DEPARTMENT OBJECT TABLE

```
DATE
Friday, June 11, 1982 9:36 AM
OK, ED WA-C02
EDIT
P500
.NULL.
^001^001
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```

OBJECT TABLE

```
110001EXECUTIVE SALARIES
120002SWORN/UNIFORM SAL
120102REGULAR SALARIES
120205TERMINAL LEAVE
120305SERVICE AWARDS
120402OUT OF GRADE PAY
120603CETA OVERMATCH
120703CETA OVERTIME
121005HOLIDAY PAY
129903CETA SUBGR PART SAL
130002OTHER SALARIES
130103CETA SALARIES
130203CETA TERMINAL LEAVE
130303CETA ALTERNATE PAY
130402CETA ALTERNATE PAY
139903CETA SUBGR STAFF SAL
140002OVERTIME PAY
150002INCENTIVE PAY
150102BONUS PAY
151005SUPER COMPENSATION
151105EMP PEN CONTR AVG
160004LABOR OVERHEAD
```

170003CETA SALARIES - DEPT

170106CETA SELF INSURANCE

180006CETA BENEFITS

190004BILLED CTY LABOR CST-CAP WORK ORDER

210005FICA TAXES

220005PENSION CONTRIBUTIONS

220105PENSION PAYMENTS

220205PENSION CONTRIB REFUND

220505RETR CONTR-BACK PEN

221005FIRE @ POLICE R CONT

229906CETA SUBGR RETR CONT

230005LIFE INSURANCE

230105AD @ D INSURANCE

230205HEALTH INSURANCE

239106CETA SUBGR AD@D INS

239206CETA SUBG HEALTH INS

240005WORKMENS COMP

249906CETA SUBG WORK COMP

250005UNEMPLOYMENT COMPENSATION

259906CETA SUBGR FICA TAX

269906CETA SUBGR FICA TAX

290002PERS RECLASS

310007PROFESSIONAL SVCS EMPLOYEES

310107PROFESSIONAL SVCS

320007AUDITING

330007COURT REPORTER

340007LAUNDRY

340107CONTRACTURAL SVCS

400007TRAVEL

400107MOTOR POOL

400207AUTO ALLOWANCE

400307MAYORS SPECIAL CONT

401007BILLED VEHICLE CST-CAP WORK ORDER

410007TELEPHONE

420007CITY BUS RENT

420107FREIGHT

420207MAILROOM

420307POSTAGE

430007UTILITIES - CITY

430110UTILITIES - OTHER

430207INCINERATOR

430307LANDFILL - COUNTY

430407ENTPR - ADMIN UTIL

440007RENT

440107RENT - CURTIS HIXON

440307LEASE/PUR CAP EQUIP

440407LEASE-LAND

450007SURETY AND INDEMNITY BONDS

450107INSURANCE

```
450207INSURANCE              INTERDEPARTMENTAL
450307PAID TO CLAIMANTS
450407INS HETH CLMS
450507PAID TO CLAIMANTS      CETA
450607PAID TO CLAIMANT       PRIOR YEAR CLAIM
460008REPAIR                 CONTRACTORS
460108REPAIR                 BUILDING MAINTENANCE
470007PUBLICATIONS DEPT
470107CONV COPIER SERV
480007EMPLOYEE               AWARDS AND FOOD
480107CONTINGENCY
490007ADVERTISING
490111DEPRECIATION
490207BAD DEBTS
490307LICENSE REFUND
490407OTH CURRENT CHARGES
490507DUES AND               SUBSCRIPTIONS
490607LICENSES
490807LOSS ON SALE OF ASSET
491007RELOCATION PAYMENTS
491107EQUIPMENT ALLOCATION
491207LOSS ON                SALE OF INVESTMENTS
491307PETTY CASH THEFT
491407INTERDEPARTMENTAL
491507REHAB GRANTS
491607ALLOC OF ADMIN OVHD
```

```
491707INTERDEPARTMENTAL CHGS
491807LEGAL SER INT CHGS
491907SAFETY SERV INT CHGS
492007UTILITY BILL CHGS
492107OTHER CURRENT CHGS
492307WATER RESR CODR CHGS
492407PARK RES SGN INT CHG
492507UTILITY MAIL OPENING
492607CENTRAL CASHIER CHGS
492707BAD DEBT - PROP
492807BAD DEBT - WORK
492907COLLECTION CHARGES
493007ADMIN SETTLEMENT
493107OTH CUR CHGS - U DEV
493207OTH CUR CHG - G F S
510007OFFICE SUPPLIES      OUTSIDE
510207OFFICE SUPPLIES      CENTRAL SUPPLY
520007FUEL AND LUBRICANTS
520109CHEMICALS
520207UNIFORMS
520307OTHER SUPPLIES       OUTSIDE
520407MATERIALS
520507TOOLS AND            MINOR EQUIPMENT
520607EMPLOYEE ALLOWANCE
```

```
520707MEDICAL SUPPLIES     CENTRAL SUPPLY
520807MISC SUPPLIES
520907MEDICAL SUPPLIES     OUTSIDE
521007OTHER SUPPLIES       CENTRAL SUPPLY
521207BILLED CTY MATERIAL CST-CAP WORK ORDER
521307LOST @ STOLEN EQUIP
530007ROAD MATERIAL
590007DEFERRED MAINTENANCE
720012INTEREST
720112INTEREST ON          OTHER DEBTS
7300120THER CAP/DEBT EXP
7301120THER DEBT SERVICE
930111DEPRECIATION
```

# APPENDIX F

## WATER DEPARTMENT COST CENTER TABLE

COST CENTER TABLE

| CC | AI | AC | ADMIN. SET | COST CENTER NAME | |
|---|---|---|---|---|---|
| 01 | 00 | 00 | 0011000001 | SULPHUR SPRINGS | INTAKE @ PUMPING |
| 02 | 00 | 00 | 0011000001 | SULPHUR SPRINGS | TRANSMISSION |
| 03 | 00 | 00 | 1010000001 | HILLSBOROUGH RIVER | DAM |
| 04 | 00 | 00 | 1010000001 | HILLSBOROUGH RIVER | DAM GROUNDS |
| 05 | 00 | 00 | 1010000001 | HILLSBOROUGH RIVER | DAM HOUSE |
| 06 | 00 | 00 | 0011000001 | HILLSBOROUGH RIVER | INTAKE |
| 07 | 00 | 00 | 0011000001 | HILLBOROUGH RIVER | LOW LIFT PUMPING |
| 08 | 00 | 00 | 0011000001 | HILLSBOROUGH RIVER | TRANSMISSION |
| 09 | 00 | 00 | 0011000001 | SATELLITE WELLS | |
| 10 | 00 | 00 | 0110000001 | MORRIS BRIDGE WELLS | |
| 11 | 00 | 00 | 0110000001 | MORRIS BRIDGE WELLS | GROUNDS @ BLDGS |
| 12 | 00 | 00 | 0110000001 | MORRIS BRIDGE LOW | LIFT PUMPING |
| 13 | 00 | 00 | 0110000001 | MORRIS BRIDGE | TRANSMISSION |
| 14 | 00 | 00 | 0000000000 | | |
| 15 | 00 | 00 | 0000000000 | | |
| 16 | 00 | 00 | 0000000000 | | |
| 17 | 00 | 00 | 0000000000 | | |
| 18 | 00 | 00 | 0000000000 | | |
| 19 | 00 | 00 | 0000000000 | | |
| 20 | 00 | 00 | 1010000001 | IN-RIVER TREATMENT | |
| 21 | 00 | 00 | 1010000001 | HILLSBOROUGH RIVER | PLANT TREATMENT |
| 22 | 01 | 12 | 0000000000 | HILLSBOROUGH RIVER | PLANT TREATMENT ADMN |
| 23 | 00 | 00 | 1010000001 | HILLSBOROUGH RIVER | FILTERING |
| 24 | 00 | 00 | 1010000001 | HILLSBOROUGH RIVER | SLUDGE PROCESSING |

| | | | | | |
|---|---|---|---|---|---|
| 25 | 00 | 00 | 0000000000 | | |
| 26 | 00 | 00 | 0010000001 | HILLSBOROUGH RIVER | LAB @ TECHNICAL |
| 27 | 00 | 00 | 1010000001 | SATELLITE WELLS | TREATMENT |
| 28 | 00 | 00 | 0110000001 | MORRIS BRIDGE | TREATMENT |
| 29 | 02 | 10 | 0000000000 | MORRIS BRIDGE | ADMINISTRATIVE |
| 30 | 00 | 00 | 0110000001 | MORRIS BRIDGE | FILTERING |
| 31 | 00 | 00 | 0110000001 | MORRIS BRIDGE LAB | @ TECHNICAL |
| 32 | 00 | 00 | 0110000001 | MORRIS BRIDGE PLANT | GROUNDS @ BLDGS |
| 33 | 03 | 32 | 0000000000 | PRODUCTIVE MAINT | ADMINISTRATIVE |
| 34 | 00 | 00 | 1010000001 | HILLSBOROUGH RIVER | PLANT GROUNDS @ BLDG |
| 35 | 00 | 00 | 0000000000 | | |
| 36 | 00 | 00 | 0000000000 | | |
| 37 | 00 | 00 | 0000000000 | | |
| 38 | 00 | 00 | 0000000000 | | |
| 39 | 00 | 00 | 0000000000 | | |
| 40 | 00 | 00 | 0011000001 | HILLSBOROUGH RIVER | HIGH LIFT PUMPING |
| 41 | 04 | 09 | 0000000000 | HILLSBOROUGH RIVER | PUMPING ADMIN |
| 42 | 00 | 00 | 0110000001 | MORRIS BRIDGE HIGH | LIFT PUMPING |
| 43 | 00 | 00 | 1010000001 | NORTHWEST REPUMPING | |
| 44 | 00 | 00 | 1010000001 | INTERBAY REPUMPING | |
| 45 | 00 | 00 | 1010000001 | HILLSBOROUGH RIVER | CLEAR WELLS |
| 46 | 00 | 00 | 0110000001 | MORRIS BRIDGE | CLEAR WELLS |
| 47 | 00 | 00 | 0011000001 | PALMA CEIA ELEVATED | TANK |
| 48 | 00 | 00 | 0011000001 | WEST TAMPA ELEVATED | TANK |
| 49 | 00 | 00 | 0000100010 | RESIDENTIAL METERS | 5/8" - 1" |

| | | | | | |
|---|---|---|---|---|---|
| 50 | 00 | 00 | 0000100010 | COMMERCIAL METERS | 1-1/2" - 2" |
| 51 | 00 | 00 | 0000100010 | INDUSTRIAL METERS | 3" @ ABOVE |
| 52 | 05 | 03 | 0000000000 | METER SHOP ADMIN | |
| 53 | 06 | 03 | 0000000000 | VALVE @ HYDRANT | ADMINISTRATIVE |
| 54 | 00 | 00 | 0000010010 | VALVES 10 @ OVER | |
| 55 | 00 | 00 | 0000010010 | HYDRANTS | |
| 56 | 00 | 00 | 0000010010 | VALVES UNDER 10" | |
| 57 | 00 | 00 | 0000001110 | MAINS 16" @ OVER | |
| 58 | 00 | 00 | 0000001110 | MAINS 10" - 14" | |
| 59 | 00 | 00 | 0000001110 | DISTRIBUTION LINES | 2" - 8" |
| 60 | 00 | 00 | 0000001110 | SERVICE LINE OVER 2" | |
| 61 | 00 | 00 | 0000001110 | SERVICE LINES 2" | @ UNDER |
| 62 | 00 | 00 | 0000001110 | FIRE PROTECTION | LINES |
| 63 | 00 | 00 | 0000000010 | DISTRIBUTION GROUNDS | @ BLDGS |
| 64 | 00 | 00 | 0000000010 | DISTRIBUTION EQUIP | MAINTENANCE |
| 65 | 07 | 06 | 0000000000 | SERVICE INSTALLATION | ADMINISTRATIVE |
| 66 | 08 | 06 | 0000000000 | CONSTRUCTION @ | MAINTENANCE ADMIN |
| 67 | 00 | 00 | 0000000010 | CROSS CONNECTION | CONTROL |
| 68 | 00 | 00 | 0000000000 | | |
| 69 | 00 | 00 | 0000000000 | | |
| 70 | 00 | 00 | 0000000000 | | |
| 71 | 00 | 00 | 0000000000 | | |
| 72 | 00 | 00 | 0000000000 | | |
| 73 | 00 | 00 | 0000000000 | | |
| 74 | 00 | 00 | 0000000000 | | |

| | | | | | |
|---|---|---|---|---|---|
| 75 | 00 | 00 | 0000000000 | | |
| 76 | 00 | 00 | 0000000000 | | |
| 77 | 00 | 00 | 0000000000 | | |
| 78 | 00 | 00 | 0000000000 | | |
| 79 | 00 | 00 | 0000000000 | | |
| 80 | 00 | 00 | 0000000000 | DIRECTOR | |
| 81 | 00 | 00 | 0000000000 | ADMINISTRATIVE AND | FISCAL |
| 82 | 00 | 00 | 0000000000 | EPA COOPERATIVE | AGREEMENT |
| 83 | 00 | 00 | 0000000000 | ENGINEERING | |
| 84 | 09 | 15 | 0000000000 | ADMINISTRATIVE - | DISTRIBUTION |
| 85 | 10 | 32 | 0000000000 | ADMINISTRATIVE - | PRODUCTION |
| 86 | 00 | 00 | 0000000000 | STORES - | DISTRIBUTION |
| 87 | 00 | 00 | 0000000000 | STORES - PRODUCTION | |
| 88 | 00 | 00 | 0000000000 | INSPECTION & SURVEY | |
| 89 | 00 | 00 | 0000000000 | | |
| 90 | 00 | 00 | 0000000000 | | |
| 91 | 00 | 00 | 0000000000 | | |
| 92 | 00 | 00 | 0000000000 | | |
| 93 | 00 | 00 | 0000000000 | | |
| 94 | 00 | 00 | 0000000000 | | |
| 95 | 00 | 00 | 0000000000 | | |
| 96 | 00 | 00 | 0000000000 | | |
| 97 | 00 | 00 | 0000000000 | | |
| 98 | 00 | 00 | 0000000000 | INTEREST & OTHER | DEBT EXPENSE |
| 99 | 00 | 00 | 0000000000 | DEPRECIATION | |

# APPENDIX G

## SANITARY SEWER DEPARTMENT COST CENTER TABLE

```
DATE
Thursday, June 10,
OK, ED SW-C02
EDIT
P9999
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1982 6:16 PM
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COST CENTER TABLE

001PLANT PUMP STATION

002JUNCTION CHAMBER 1

003METER VAULT 1

004SCREEN & GRIT 1

005SCREEN & GRIT 2

006JUNCTION CHAMBER 2

007METER VAULT 2

008JUNCTION CHAMBER 3

009PRIMARY SED TANKS

010MAIN PUMP STATION

011REACTORS

012FINAL SED TANKS

013INTERMED PUMP STA

014DENIT FILTERS

015FILTER BUILDING

016CHLORINATION EQUIP

017JUNCT CHAMBER #4

018OUTFALL STRUCTURE

020PRIM SLUDGE PU STA

021ANAEROBIC DIGEST TK

022SLUDG PUMP STA #1

023SLUDG PUMP STA #2

024SLUDGE PUMP STA #3

025AEROBIC DIGEST TK

026SLUDGE THICKEN TKS

027PRIM SLUDG DRY BEDS

028SLUDGE CONTR BLDG A

029SLUDGE CONTR BLDG B

030SLUDGE TRMT BLDG

039OLD ADMIN BLDG

040OPER & MAINT BLDG

041OXY GEN & STR EQUIP

042CMC HANDL EQUIP PLA

043CMC STORAGE TANKS

044PLT SWITCHGEAR BLDG

045PIPE TUNNEL

051MAINT BLDG-PU STA

052EFFLUENT BUILDING

053CARPENTER SHOP

054AWT DRY SLUDG CTR

055AWT SLUDG DRY BEDS

061FLT CHAIN PIN REPL

062SLUDGE HANDL LAGOON

063SOLID HDL PILOT PRG

064SLUDGE PRESS FACIL

065PLANT GENERAL

099USF TREATMENT PLANT

101AIRPORT PUMP STA

102ALASKA PUMP STATION

103ANDROS PUMP STATION

104ARMENIA PUMP STA

105BAY PUMP STATION

106BAYSHORE PUMP STA

107BALLAST PT PUMP STA

108BEACH EAST PUMP STA

109BEACH PARK PUMP STA

110BEACHWAY PUMP STA

111BRANCH PUMP STATION

112BURKE PUMP STATION

113BUSCH PUMP STATION

114CARMEN PUMP STATION

115CAYUGA PUMP STATION

116CHELSA PUMP STATION

117CLARK PUMP STATION

118COACHMAN PUMP STA

119CO HOSP PUMP STA

120CORDELIA PUMP STA

121CUBA PUMP STATION

122CULBREATH BY PU STA

123DALE MABRY PUMP STA

124COLUMBIA PUMP STA

125DAVIS ISL PUMP STA

126DAZZO PUMP STATION

127DELEUIL PUMP STA

128DEXTER PUMP STATION

129DREW #3 PUMP STA

130E TAMPA PUMP STA.

131EGYPT LAKE PUMP STA

13218TH ST PUMP STA

133ELROD PUMP STATION

134EPPS PARK PUMP STA

135EXEC PARK PUMP STA

13615TH ST PUMP STA

13755TH ST PUMP STA

13842ND ST PUMP STA

13943RD ST PUMP STA

140FREEMONT PUMP STA

141JUANITA PUMP STA

142WOODCREST PUMP STA

143ADAMO ACRES PUMP STA

144BRYAN WOOD PUMP STA

145GANDY 10 PUMP STA

146GOLF COURS PUMP STA

147GOMEZ PUMP STATION.

148GUERNSEY PUMP STA

149GUNLOCK PUMP STA

15023RD ST PUMP STA

151HANNA PUMP STATION

152HIGHLAND PUMP STA

153HILLTOP PUMP STA

154HIMES PUMP STATION

155HOOVER PUMP STATION

156HUMPHREY PUMP STA

157IDAHO PUMP STATION

158IDLEWILD PUMP STA

159INCINERATOR PUMP STA

160INSPEC STA PUMP STA

161KIRBY PUMP STATION

162KNIGHTS PUMP STA

163KRAUSE PUMP STATION

164LAKE ELLEN PUMP STA

165LAKE FOREST PUMP ST

166LAKE SHORE PUMP STA

167LAMANCHA DOS P STA

168LAUREL PUMP STATION

169LAWN PUMP STATION

170LINEBAUGH PUMP STA

171LOIS PUMP STATION

172LOUISIANA PUMP STA

173MANGO PUMP STATION

174MARINER PUMP STA

175MCBERRY PUMP STA

176MELROSE PUMP STA

177MORRISON PUMP STA

178MULBERRY PUMP STA

179NEPTUNE WAY P STA

180NORMA PARK PUMP STA

181N POINTE PUMP STA

182111TH AVE PUMP STA

183109TH AVE PUMP STA

184122ND AVE PUMP STA

185OAK PUMP STATION

186OSBORNE PUMP STA

187PALMETTO PUMP STA

188PALM RIVER PUMP STA

189PAXTON PUMP STATION

190PERRY PUMP STATION

191POST OFFICE P STA

192PRESCOTT PUMP STA

193QUINCY PUMP STATION

194RALSTON BEACH P STA

195RIDGEWOOD PUMP STA

196RIVERGROVE PUMP STA

197ROCKY POINT P STA

198ROGERS PUMP STATION

199ROME PUMP STATION

200ST ISABEL PUMP STA

201SAN JOSE PUMP STA

202SCHLITZ PUMP STA

203SEMINOLE PUMP STA

204SEVERN

205SHERWOOD HEIGHTS

206SLIGH

207SPRUCE

208STERLING

209SUNSET

210SWANN

211TAMPA GENERAL

212TAMPA BAY

213TAMPA VILLAS

214TEMPLE KNOLL

21534TH ST

216TRASK

217TRILBY

218TROUT

21912TH ST

22021ST AVE

22126TH AVE

22230TH ST

223TYSON

224UNIVERSITY MALL

225VIRGINIA

226WESTSHORE PLAZA

227WEST TAMPA

228WHISPER LAKE

229BEACH WEST

230E LAKE

231BRANDON METER

232STALL

233LAKE MAGDALENE

234LURALINE

23525TH ST

23613TH ST

237131ST ST

238FAIROAKS

2400AK RAMBLE PUMP STA

241TERRACE VILLAGE AVE PUMP STA

242FOWLER AVE PUMP STA

243MIDLAKE PUMP STA

244CHURCH

2450REGON

246INTERBAY

247PRICE AVE

248SAN CARLOS

249LAKE FOREST #2

251SUGARCREEK

252FOREST HILLS

253BURNES LAKE

254VISUAL ARTS

255INDIANA

256PINERIDGE

257GRECO LIFT STA

258BARCELONA

259PALMIRA

260PINE LAKE

261WOODLANDS

26237 ST PUMP STA

310E TAMPA TRK-INCPR

311S 42ND ST TRUNK

312PLYMOUTH TRUNK

313N 42ND ST TRUNK

314LA AVE CHELSEA TK

315CARACAS TK

316B-WAY TK

31735TH TK

318BEARS AVE F ML

31922ND AVE TK

32031ST TK

3212ND AVE BRANCH

322N BAY TK

32319TH ST TK 24TH TK

32424TH TK

325MAIN OUTLET INCPR

3264TH AVE TRUNK WEST

3274TH AVE TRUNK EAST

328BROADWAY INCPR

329OREGON TK

330FOREST HILLS TRUNK

331WATERS AVE TRUNK

332SITKA ST TRUNK

3330TIS AVE TRUNK

334FOREST HILLS TRUCK

335SULPH SPGS R INCPR

336LOWRY PARK TRUNK

337HENRY AV TRUNK RIVER-SHORE DR TRUNK

338WELLSWOOD TRUNK

339W HILLSBORO INCPR

340SULPHUR SPGS TRUNK

341BROOKS ST TRUNK

34215TH ST TRUNK

343TALIFERRO TRUNK

344SULPHUR SPGS TRUNK TEMPLE TERRACE TRUN

345UNIVERSITY TRUNK

34615TH ST TK UNIV TK

34718TH ST TK SITKA BR

348UNIV TK 30TH ST BR

349UNIVERSITY TRUNK BOUGANVILLA TRUNK

350LOUISIANA-CHELSA TK

3510LA ST TRUNK

352COMMANCHE TRUNK

353IDLEWILD AVE BR

354COMMANCHE TRUNK COMMANCHE BRANCH

355KNOLLWOOD AVE TRUNK

356SEMINOLE HGTS INCPR

357LAKE MAGDALENE F M

358BUFFALO AVE TRUNK

359NORTH BLVD TRUNK

360RIVER HGTS INCPR

361W RIVER INCPR W TAMPA TRUNK

362 SPRUCE ST TRUNK

363MACDILL-KATHLEEN TK

364DREW FIELD TRUNK

365HABANA-ST LOUIS TK

366W RIVER INCPR N BLVD TRUNK

367PLYMOUTH TRUNK

368LEMON-GRAY TRUNK

369FREMONT-GRAY TRUNK LEMON-GRAY TRUNK

370W RIVER INCPR

371BAYSHORE INCPR

372WATER ST TRUNK

373ASHLEY DR INCPR

374DOWNTOWN INCPR

375MORGAN ST TRUNK

376DALE AVE TRUNK

377LOIS AVE TRUNK

3780CCIDENT TRUNK

379N MANHATTAN TRUNK

380S MANHATTAN TRUNK

381SANTIAGO ST TRUNK

382EASTERN BR F M S

383EASTERN BR F M N

3840RIENT RD F-MK

385301 F-M

386EASTLAKE F-M

387S MANHATTAN TRUNK PALMIRA INTERCEPTOR

388PALMA CEIA TRUNK

389GOMEZ BRANCH

390PALMA CEIA TRUNK MORRISON AVE BR

391MORRISON AVE BR HIMES AVE TRUNK

392PALMIRA INTERCEPTOR

393WATROUS ST BRANCH BAYSHORE BLVD INCPR

394PLATT ST TRUNK

395DELAWARE TRUNK

396JULIA ST TRUNK

397EUCLID ST TRUNK

398BALLAST POINT TK

801ADMIN-GENERAL

802ADMIN-EXECUTIVE

803ADMIN-ACCOUNTING

804ADMIN-CUSTOMER SERV

805ADMIN-CONTRACT ADM

806ADMIN-SICK LEAVE

807ADMIN-ANNUAL LEAVE

808ADMIN-PROF LEAVE

809ADMIN-FUNERAL LEAVE

810ADMIN-HOLIDAY

811ADMIN-JURY DUTY

812ADMIN-MILITARY

813ADMIN-ADM LEAVE

814ADMIN-UNION ACTV

820DPW PROJECTS

821ENGINEERING

822ENGR-TRAINING

823ENGR-INSP-GEN

824ENGR-INSP-UTILITY

825ENGR-INSP-DEVELOP

826ENGR-SURVEY

827ENGR-PLANNING

828ENGR-FLOW MEASURING

829ENGR-DESIGN-GEN

830ENGR-DESIGN-UTILITY

831ENGR-DRAFTING

832ENGR-DESIGN-DEVELOP

833ENGR-DEV REVIEW

834ENGR-UTILITY REV

835DESIGN PERMITS

836DESIGN COMPUTER

837WORK MANAGEMENT - GENERAL

838WORK MANAGEMENT - MAINT. YARD

839WORK MANAGEMENT - TREATMENT PLANT

840WORK MANAGEMENT - INSPECTION

841COLL-ADMIN

842COLL-DISPATCHING

843COLL-MATERIAL HANDL

844COLL-TRAINING

845COLL-EQUIP CONTROL

846COLL-PLUGGING

847COLL-EMERGENCY

848COLL-SURVEY

849SUPPLY SUPPORT

851GENERAL MATERIALS

861TREAT-ADM

862TREAT-TECH SERV-GEN

863TREAT-DPW ANALYSIS

864TREAT-BAY STUDY

865TREAT-TRAINING

866TREAT-MATRL HANDL

867TREAT-SANIT ANALYS

868TREAT-LAB SERVICES

869PUMP STA INSPECT

870MAINT SUP SERV CONT

871GRNDS MAINT - GENL

872D P W NURP ANALYSIS

980INTEREST

990DEPRECIATION

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# APPENDIX H

## WATER DEPARTMENT EXPENSE TABLE

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1                                                    EXPENSE TABLE

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                                    1OPERATING SUPERVISION

                                    2OPERATING ENGINEERING

                                    3OPERATING GENERAL

                                    4

                                    5MAINTENANCE SUPERVISION

                                    6MAINTENANCE ENGINEERING

                                    7MAINTENANCE GENERAL

                                    8

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